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CITY OF YELLOWKNIFE

Background Report (Draft)

Community Plan Update 2019

October 2, 2019



City of Yellowknife
4807 52nd Street
Yellowknife, NT
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Attention: Ms. Nalini Naidoo
Director, Planning and Development

RE: Draft Background Report, Community Plan Review

We are pleased to submit the revised Draft Background Report in support of the Community Plan Review. This work summarizes data, policies, best practices and consultation reports gathered throughout the Community Plan Review process. Dillon has worked in Yellowknife since 1975 and continues to value the relationship established with the City.

This report serves to support the updated 2019 Community Plan through the provision of accumulated statistical data, calculations and community knowledge. Additionally, the background report provides context for time and direction of the community, for future review of the plan. As a legislated requirement, in the *Community Planning and Development Act*, this work further supports the final submission of the Community Plan for Ministerial approval by providing surveys and studies of land use, population growth, the economic base of the municipality and its needs relating to transportation, communication, public services and social services.

Sincerely,

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1.0 Introduction

The purpose of the Community Plan Background Report is to provide a comprehensive resource to the City of Yellowknife (City) to inform the Community Plan. A Community Plan is a key document that guides the City's vision for future growth and development over the next 20 years.

Community Plans were formerly known as General Plans and the Community Plan is an update of the 2011 General Plan. Community Plans are required to comply with the GNWT *Community Planning and Development Act*. This Report provides relevant background information relating to each of the topics that must be included in the Community Plan. The GNWT passed this legislation in 2013 and it states that, "The purpose of a community plan is to provide a policy framework to guide the physical development of a municipality, having regard to sustainability, the environment, and the economic, social and cultural development of the community" (s. 3(1)).

The Report summarizes and highlights emerging planning issues that were extracted from municipal and NWT studies, existing plans, socio-economic and spatial data, and other planning related documents. The Report was also informed by City Departmental staff, stakeholder engagement, and feedback from community members.

The information in the Report should serve as a reference to help create a Community Plan that helps achieve the City's long-term vision in addition to fulfilling the requirements of the GNWT *Community Planning and Development Act*.

2.0 Approach and Methodology

The City of Yellowknife has undertaken an update to the 2012 General Plan, which follows legislated requirements as defined by the *Community Planning and Development Act* and *Cities, Towns and Villages Act*. This review and update followed six (6) phases.

Over the summer of 2018, the planning team **engaged** with residents, business and organizations informing them on the process that was being undertaken. This included participation at community events and presentations to Council. Through this period in time **background research** was being undertaken and analysis completed with the work summarized within this report. In the spring of 2019, planning week events were centred on the Community Plan update, and planning forum sessions were organized with various stakeholders to **confirm issues and identify opportunities** for improving land use decision-making. Simultaneously, the City was supporting the Government of the Northwest Territories s35 *Duty to Consult* responsibilities through outreach and engagement with the affected Indigenous organizations. Formal letters seeking input were issued to the Yellowknives Dene First Nations (YKDFN) and the North Slave Metis Alliance. The YKDFN elected to engage to ensure their important voices and plans were included. YKDFN members led open house events within the communities of Ndilo and Dettah to engage with residents in their language and amongst their leadership to affirm YKDFN land rights to withdrawn lands and the broader traditional lands which comprise the City of Yellowknife.

As a variety of ideas and opinions were collected, **planning options** were developed for consideration by council and residents. These options form the basis of the Draft Community Plan, which requires further deliberation by council and residents before submission to the Territorial Government for the **Finalized Community Plan**.



The Community Plan Review and Update process has occurred over a period of time with a municipal council election (Oct. 15, 2018), Territorial election (Oct. 1, 2019) and Federal election (Oct. 21, 2019) where it was recognized that maintaining consistent messaging and continuous engagement would be necessary.

Engagement objectives of the process included:

- Meeting the statutory requirements of the *Community Planning and Development Act* and the *Cities Towns and Village Act*;
- Sharing information with the public that clearly describes Community Plan update scope and process;
- Providing opportunities for the public, community organizations and other stakeholders to meaningfully participate, contribute and provide input at different stages of the planning processes on the vision of the community over the next 10 to 20 years through a range of mechanisms and events;
- Complying with the City of Yellowknife Council's 2016-2018 Goal of 'Better engagement with stakeholders' and 2019-2022 Goal of 'Delivering efficient and accountable government';
- Engaging with indigenous communities through a collaborative approach, moving beyond 'Duty to Consult' requirements; and
- Providing a professional development learning opportunity to help Yellowknife residents understand the purpose of the Plan, emerging ideas, trends and opportunities for how the Plan can help navigate challenging community land use issues as well as opportunities for sustainable and fiscally responsible development.

3.0 Historical Context

Established as the capital of the Northwest Territories in 1967, Yellowknife has grown from a small collection of tents and wooden shacks, to a diverse and metropolitan city on the shore of Great Slave Lake. From its humble beginnings, Yellowknife has become an important cultural landmark in the territory and is a gateway city to the rest of Canada's North.

The City of Yellowknife has sought to continuously improve upon its land use planning policies, while also following legislated requirements for review and update which previously were required to occur every five (5) years. The previous Community Plan Review established a process for the current undertaking; however, this work must also incorporate and recognize significant historical events and change which have occurred since the most recent plan update in 2012.

The *Community Planning and Development Act* came into force on October 1, 2013, replacing the previous *Planning Act*, as part of a variety of Territorial changes which occurred through the devolution of responsibilities from the Federal Government. Beyond simply extending the minimum time period for Community Plan review from five years to eight years, the new act redefined General Plans, as Community Plans, and sought to provide more options for municipal governments to implement local solutions and direct local development. As the largest municipality in the Territory, such policy changes supported greater options for land use planning and a strong mandate for taking greater control of land use decisions within the City.

Policies and devolution legislation have been the greatest policy changes since 2012; however, the economic circumstances of the Territory and City have also greatly changed since the most recent plan update. As will be described in detail in subsequent sections (4.6), the mining industry has continued to change in the region with the closure of Snap Lake and opening of the Gacho Kué diamond mine. Continued change in these major economic drivers are expected over the review period of this Community Plan. Tourism and mine remediation are also driving the local economy, while population forecasts are not expected to follow past projections of growth. Intra-territorial migration (**section 7.0**) is likely to be responsible for any modest population growth that does occur within the City.

Related to the above factors, the City has experienced considerable change in the preceding years, with mining head offices moving to southern cities, and devolution resulting in changes to federal and territorial administration. A new hospital, water treatment plant and highway (rerouting of Highway 4) have been completed, with major remediation set to commence, upon permit approvals on the Giant Mine site.

This Community Plan update occurs at a point in time when the City of Yellowknife is reimagining its role and future, recognizing that it serves as the capital and regional centre for a variety of people, with a

changing economic base centred on servicing and tourism. The closure of mining operations, and likely future closures, along with the cancellation of the Mackenzie Natural Gas Pipeline and moratorium on Arctic drilling have had negative economic impacts upon the city, while a growing tourism industry and government infrastructure spending have resulted in positive economic impacts; the future economic conditions of the city remain unclear.

3.1 Regional Context

The City of Yellowknife recognizes that its location occurs on the traditional territory of the Yellowknives Dene First Nation and the homelands of the North Slave Metis Alliance. While anticipating an Agreement-In-Principle, negotiations continue on establishing a Final Agreement and self-governance. Representing the YKDFN, the NWT Treaty 8 Tribal Corporation represents all four Akaitcho First Nations. They are: Deninu Kue, Lutsel K'e, Dettah, and Ndilo. Its primary function is to negotiate the implementation of the Treaty that was concluded in 1900. The basis of all negotiations is the implementation of the spirit and intent of the Treaty, based on the oral understanding of the Akaitcho Elders.

The Akaitcho Dene First Nations (ADFN), the GNWT and Government of Canada (Canada) are negotiating an Agreement-in-Principle (AIP) on land, resources and self-government. The parties signed a Framework Agreement on July 25, 2000 in Deninu K'ue (Fort Resolution). The Framework Agreement lists the subjects for negotiation and describes how the parties will negotiate an Agreement-in-Principle (AIP) and Final Agreement. Formal negotiations towards an Akaitcho AIP began in September 2001.

The Yellowknife Dene First Nation (YKDFN) are one of the First Nations in the Akaitcho working towards finalizing the Akaitcho Land Withdrawal process. The YKDFN is working directly with the City as part of the continued negotiations within the Akaitcho Treaty 8 Tribal Corporation. The Lutsel'ke Dene First Nation and Deninu Kue First Nation are concentrated in other settlement areas located on the east and southern shore of Great Slave Lake.

The community plan and current Agreement-In-Principal processes include support for reconciliation and include ideals which seek to advance the mutual goal of **regional coexistence and shared prosperity** between the City of Yellowknife, the GNWT, the YKDFN and the broader 'geographic and economic region'. Through a Final Agreement, the YKDFN will be provided lands within the City of Yellowknife, and regional area, with an opportunity to govern these lands as their members decide. Some lands may be used by members and the first nation land corporation to develop business and increase economic opportunities for members while also benefiting the City of Yellowknife.

Recently, mutual agreement has been reached by each government on changes to the City of Yellowknife's boundary (YKDFN Band Council Resolution – YDCR#2019-06-19-002, and City of Yellowknife Council Motion 0177-19), to reflect self-governance of the community of Ndilo and claims to lands which currently comprise part of the cities boundary. The City of Yellowknife's motion in support

of the YKDFN Band Council resolution further directed City Administration to jointly apply to the Government of the Northwest Territories for a community boundary revision.

Additionally, the city has sought to improve its relationship with the YKDFN through the work of its heritage committee and planning department, working to support the establishment of monuments and narratives regarding the people who still reside in the area and upon whose traditional lands the city has been established. Recently, the City and YKDFN have jointly submitted an application and successfully been selected for a Community Economic Development Initiative (CEDI), supported by Council for the Advancement of Native Development Officers (Cando) and the Federation of Canadian Municipalities (FCM). This economic development partnership between communities will strengthen existing relationships and advance economic development across the region for the next two years and the future.

In the past, a commitment to engagement and regional co-existence has been established between the City and the YKDFN, as set out in a previous (2002) Memorandum Of Understanding (MOU). The MOU contained a provision (Section 2(a)(i)) regarding notification by the City to the YKDFN when a Community Plan (a 'General Plan') is being amended or adopted pursuant to legislation. City Council directed the Mayor and City Administration to enter into a new Memorandum Of Understanding (MOU) with the YKDFN at the August 26, 2019 Council meeting. This formal acknowledgement of cooperation will help to create a level of certainty, and contribute to existing relationships for the purpose of sharing information, improving communications, addressing issues of mutual interest and raising awareness of the history of the land and people of Yellowknife.

Through the current Community Plan process, some YKDFN have identified that in the past they were made aware of the city's community planning work, however could not meaningfully contribute as they continued to resolve their treaty negotiations. At this time, the YKDFN are more able to share their own intentions for their land and vision for community growth and development. The current engagement has been greatly appreciated, and strongly supports the City in its community planning work.

The City will continue to seek ways of building this relationship, and contributing to actions in respect of the Truth and Reconciliation Report and Recommendations (2017) and the response by the GNWT and the City of Yellowknife through the work of the *Heritage Committee Strategic Plan* (2017).

The City of Yellowknife also recognizes that there may be additional interests which overlap with the Akaitcho Land Claim, and that there is need for recognition and cooperation in respect to Tłıchq Wenek'e (Tłıchq Land Use Plan, 2013), and the Wek'èezhìi Management Area. The GNWT is the lead planning organization responsible for the coordination of regional and sub-regional planning. Their work includes recent efforts to address regional development through the Recreational Leasing Management Framework (RLMF) and the Yellowknife Periphery Area Plan (YPA-RMP). Through these regional planning

policies, the ADFN, Tłıchq and City of Yellowknife are consulted to ensure regional issues and interests are considered.

3.2 City Context

As described within the 2004 General Plan, and further described in the sections below, the City of Yellowknife has developed from frontier beginnings in the 1930's, with land use dictated by access to Great Slave Lake and in working with the local indigenous residents. Nestled within a bedrock landscape, while being hemmed in by the airport, lake and mining leases, land use planning has proven necessary and important in contrast with the reality of wilderness which surrounds the City. The existing municipal boundaries cover a total of 13,660 ha, comprised of 10,297 ha of land (75.4%) and 3,363 ha of water (24.6%). Lands within the municipal boundary include Interim Withdrawn Lands, which will form part of the Final Land Claim of the YKDFN, Federal lands being remediated or set aside (Giant Mine and Seismic Testing Facility) and Territorial Lands (Airport, Fred Henne and Yellowknife River Territorial Parks, and Con Mine Land Lease). Given these non-municipal interests and land tenure, land use decisions are often restricted with few opportunities for new development. Additionally, regional issues including the protection of drinking water source areas, aggregate and quarry resources, mining activity and transportation corridors have great impacts upon the City, but occur outside of its jurisdiction.

As the City of Yellowknife embarks on the completion of a Community Plan, which directs and accommodates change in the city over the next 20 to 30 years, such land use issues must be considered and broader discussions held with the Territorial Government and YKDFN which control much of the land within and surrounding the City. The City of Yellowknife must establish an inventory of land with clear title and tenure to control development, and support the changing needs of residents, businesses and organizations. The City is actively advocating for the transfer of all territorially controlled Commissioner's lands within municipal boundaries to the City so that there is a sufficient supply of municipally controlled land to meet the City's land development objectives (*City of Yellowknife Submission to Standing Committee on Economic Development Bill 46: Public Lands Act*).

3.2.1 Quality of Life

Semi-regular surveys of Yellowknife residents are undertaken to assess local impressions on municipal service delivery, programming, priorities and to support budgetary and planning decisions. The most recent survey was completed in May of 2017, with general results of the citizen survey providing a time comparable index of resident opinion on quality of life within the City.

Resident opinions have remained consistently high in regards to the quality of life within the City of Yellowknife; however, rising concerns with poverty, homelessness and mental health issues have led to a major decline in how residents perceive the City in the last three years. Previous surveys (2014) identified the high cost of living as the primary reason for a decline in the quality of life (42%), where this value is now second in responses (21%).

The social issues related to poverty and homelessness are dominant public concerns (69%), with the economy (23%) and municipal government services (19%) representing lesser concerns amongst respondents. Reasons for quality of life improvements focused on increased employment opportunities, new and improved services and facilities, population growth, cleanliness, transportation improvements and new or improved housing options. These responses compare with past surveys, with the greatest change being increased perceptions of improving economic circumstances.

Climate Change also continues to dominate resident discussion, and may impact upon many of the quality of life issues previously identified. The Canadian Institute of Planners (CIP) has recently prepared a policy document on climate change where climate change informed planning recognizes that communities must undertake a drastic shift in built-form and function. Mitigation of the severity of changes, adaptation of community infrastructure and disaster risk reduction strategies all have a role to play in responding to these current and future changes. Northern regions, including the Northwest Territories and City of Yellowknife, are forecast to experience some of the greatest changes due to climate change with warmer temperatures, particularly in winter, and an increase in precipitation throughout the year. Climate change may threaten key transportation and energy infrastructure which in many ways sustains life in the north. Permafrost degradation will result in significant change in the landscape, rerouting waterways and land subsidence, while an increasing number of thunderstorms fueled by a warmer and wetter landscape will create a greater number of forest fires, placing isolated communities in greater harm.

The most vulnerable residents will be the most heavily burdened with increased costs of living, as they are the least mobile, and least able to accommodate increasing costs of food, fuel and housing. Additional migration of residents from smaller communities to the City are likely to be expected and accommodated for, as climate change refugees seek to use the more robust infrastructure of the City.

The City of Yellowknife through an existing dense urban core, high rates of active transportation, high waste diversion and strong sense of community with ties to local indigenous knowledge is a leader in many aspects of climate change planning, however it must continue to improve upon infrastructure, social support and land use planning for the future climate reality.

4.0 Statistical Profile and Trends

4.1 Population

The scope and scale of the changes in a community's population provides insight on the makeup of existing and future populations. Changes to the population over time demonstrate trends, which inform planning decisions, from how policies are made (such as types of land needs and development patterns), to the daily administration of those policies. In looking forward at future population and housing projections, it is important to consider both the past and current trends.

4.1.1 Changing Population

Table 1 is based on the 2011 and 2016 Census data and compares the City's change in population from 2006 to 2016. The census data shows that the population in both Yellowknife and the NWT increased slightly, with Yellowknife experiencing a moderately faster growth rate. Statistics from the NWT Bureau of Statistics for July 1, 2018 demonstrate that the population of the City has increased in recent years to **20,607**, however census areas and collection approaches do vary from Statistics Canada census review, which will next be completed in 2021.

Table 1: Population Change, Yellowknife and NWT, 2006, 2011 and 2016

	2006	2011	2016
Yellowknife Population Count	18,700	19,234	19,569
Percentage Change from Previous Census	13.1%	2.9%	1.7%
NWT Population Count	41,464	41,462	41,786
Percentage Change from Previous Census	11%	0.01%	0.8%

Sections 4.1.2 through 4.1.3 provide further description of the changing population in the City between 2006 and 2016. The following summary provides key observations:

- The fastest growing population segment is 50+ years of age.
- Both the 5 to 9 age segment and the 35 to 39 age segment have increased as a percentage of the total population.
- The 10 to 29 year age segment declined as a percentage of the total population.
- In both the female and male demographics the 30 to 34 age segments are the largest.
- In 2016 the distribution of sexes in Yellowknife was an even split between female and male.

4.1.2 Population by Age Cohort

The City's population distribution has changed over a decade as illustrated in **Figure 1**. The following summary provides key observations:

- In 2006 the largest segment of the population of Yellowknife consisted of baby boomers as evidenced in the 40-44 at 9.7% and 45-49 at 9.2% age cohorts. The next largest cohort was the 25-29 age group at 9%.
- The proportion of baby boomers has decreased over the past ten years but remains a significant portion of the population (the 45-49 and 50-54 cohorts in 2011, and the 50-54 and 55-59 cohorts in 2016).
- In 2011 the largest segments of the population were the 30-34 cohort at 9.5% and the 25-29 cohort at 9.3%. Similarly, in 2016 the largest proportion of the population was between 30-34 at 9.3% and 35-39 at 8.6%.

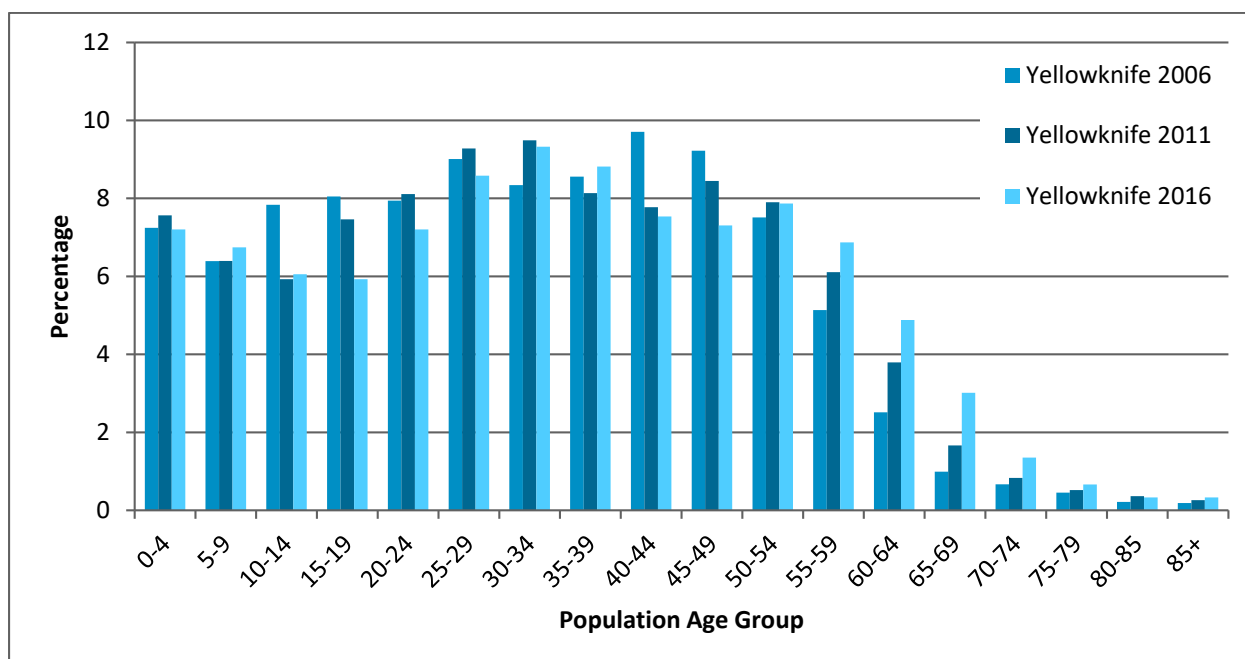


Figure 1: Population Trends by Age, Yellowknife, 2006, 2011 and 2016

Change in population of the NWT compared to the City is shown in **Figure 2**. Key findings include:

- Both the Yellowknife and NWT population pyramids demonstrate the baby boom, and baby boom echo effect¹.
- The 30 to 34 age segments are the largest of all the age segments in Yellowknife and the Northwest Territories.

¹ Baby boom echo is a secondary baby boom that occurs when the children of a baby boom have children of their own (Merriam-Webster definition)

- Yellowknife's population (as a percentage of the total population) aged 25 to 59 is larger than the Northwest Territories.
- Yellowknife's population (as a percentage) aged 0 to 24 and 60+ is smaller than the Northwest Territories.
- Median age of the population in Yellowknife is 34.5, in line with the NWT's median age of 34, and younger than the Country's median of 41.2 years.
- Overall, Yellowknife's age profile indicates a younger population than the Northwest Territories.

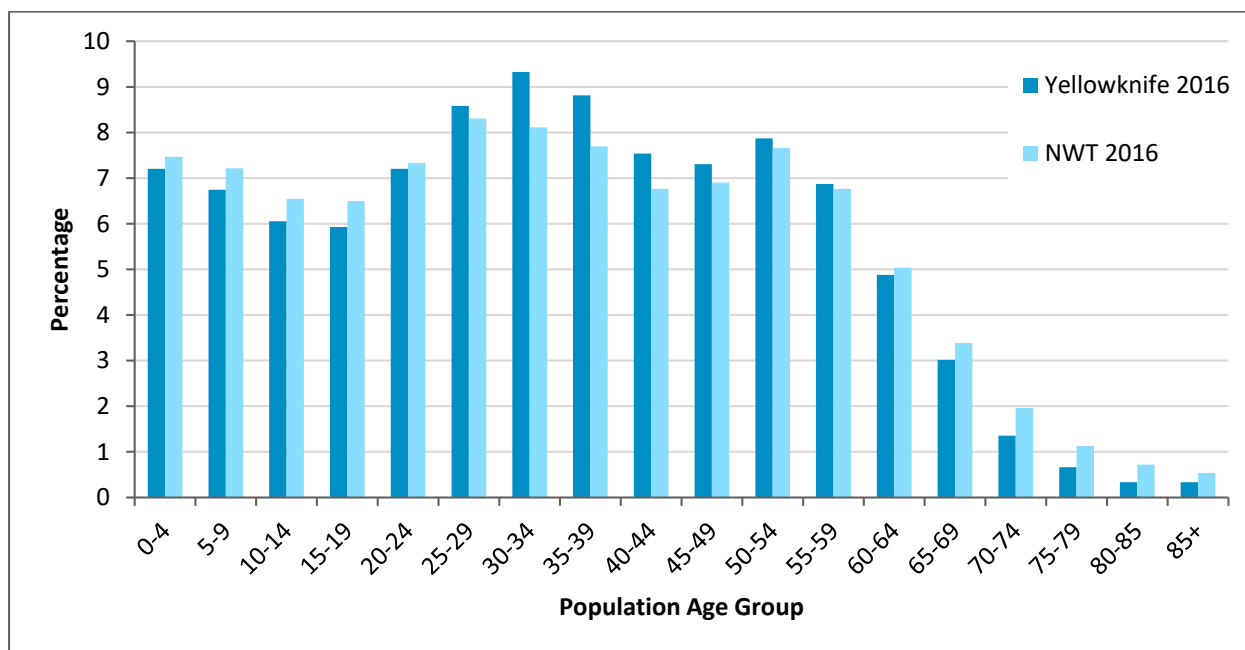


Figure 2: Population by Age for Yellowknife and NWT, 2016

4.1.3 Population by Age and Sex

Distribution of the population by age and sex for the NWT and the City are shown in **Figure 3** and **Figure**

4. Key findings in analysing this data show that:

- The populations of both Yellowknife and NWT are nearly evenly split between the sexes, at 50% females and males in Yellowknife and 49% females and 51% males in NWT.
- The bulges in the population pyramids indicate higher than historical fertility rates, which can be due to a baby boom or a large migration event. Both Yellowknife and NWT demonstrate the post-war baby boom as well as the echo of that baby boom (children of boomers). A baby boom echo would be expected to be smaller than the baby boom, which is not the case in Yellowknife, indicating a significant in-migration impact.
- The population pyramids demonstrate that Yellowknife has a lower birth rate than NWT.
- In both Yellowknife the proportion of people over 60 is currently low, however the 55-59 cohort is significantly higher so as the baby boomer population ages that proportion is expected to grow.

- Yellowknife has a lower proportion of dependent population groups (over 60 and under 14) than NWT.

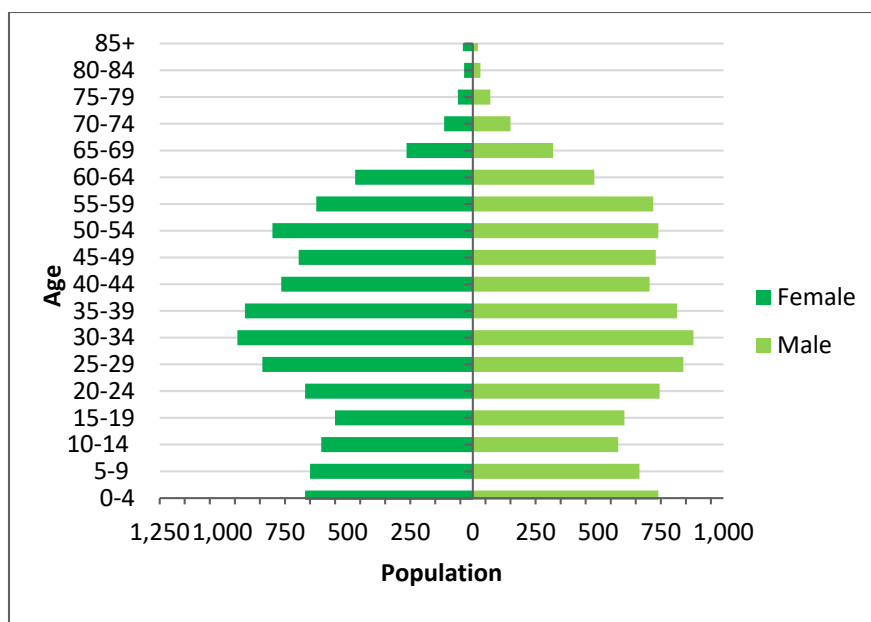


Figure 3: Population Distribution by Age and Sex, Yellowknife, 2016

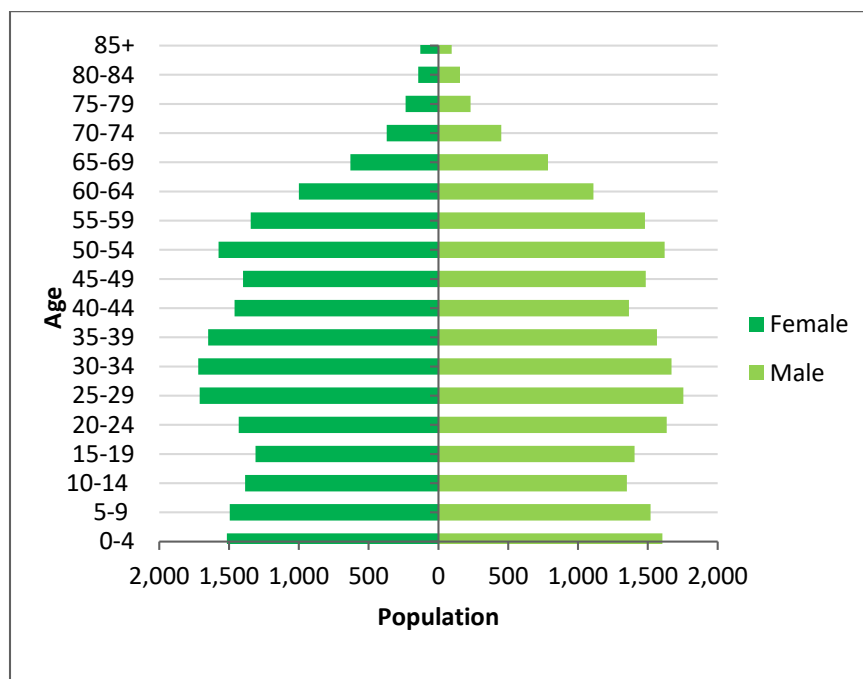


Figure 4: Population Distribution by Age and Sex, NWT, 2016

4.1.4 Family Size

Family, as defined by the census, means a married couple or common-law couple (with or without children), or a lone parent with at least one child living in the same dwelling². **Figure 5** is based on the 2016 Census data and illustrates the composition of family sizes in the City. Key findings are summarized below:

- Family sizes in Yellowknife are comparable with the rest of the Territory.
- There are slightly more 4 person families in Yellowknife compared to the rest of the Northwest Territories, and slightly less families with 5 or more persons.
- The majority of families in Yellowknife and the NWT are 2-person families, although single person households are on the rise, see **section 4.7.1** for more details on this.
- The average size of a census family is 3 people in Yellowknife, and 3.1 people in the Northwest Territories.
- More details on household profiles, such as size, tenure, types, values and availabilities are included in **Section 4.7.1** of this report.

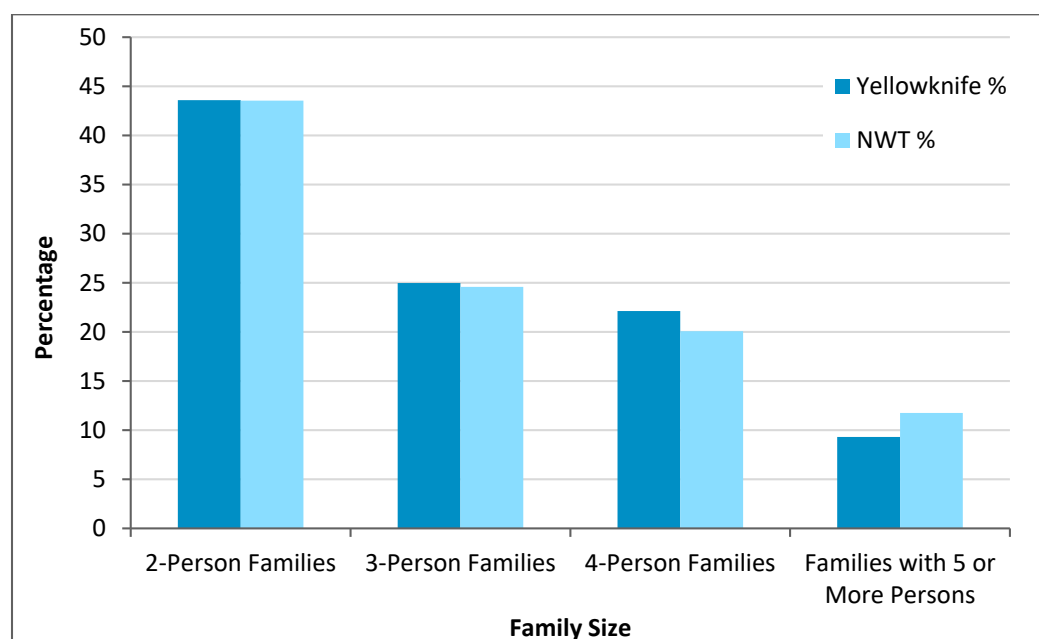


Figure 5: Family Size by Percentage, Yellowknife and NWT, 2016

² Census Canada

4.1.5 Family Characteristics

Family characteristics describe the marital status of census families. This information is useful in helping to determine the types and sizes of dwellings, as well as community amenities that may be required in a community.

In Yellowknife in 2016, nearly 60% of census families consisted of married couples, compared to less than 50% in the territory. The proportion of couples in a common-law relationship was similar between the City and NWT, at 25% and 29%, respectively. There are also notably fewer lone-parent families in Yellowknife, compared to NWT, at 16% in the City, and 22% in the territory.

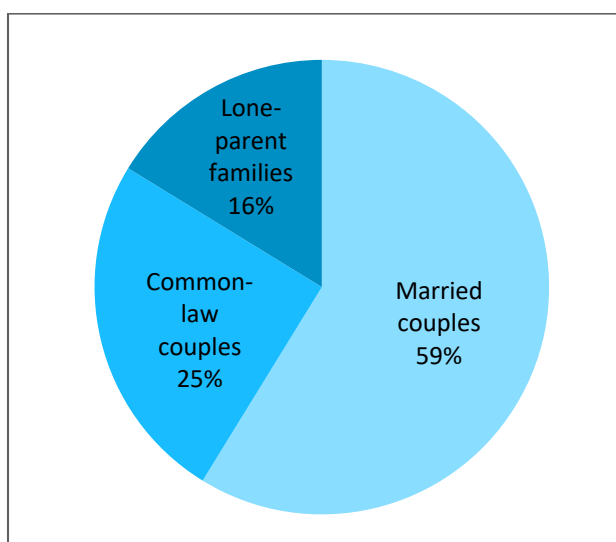


Figure 6: Family Characteristics by Percentage, Yellowknife, 2016

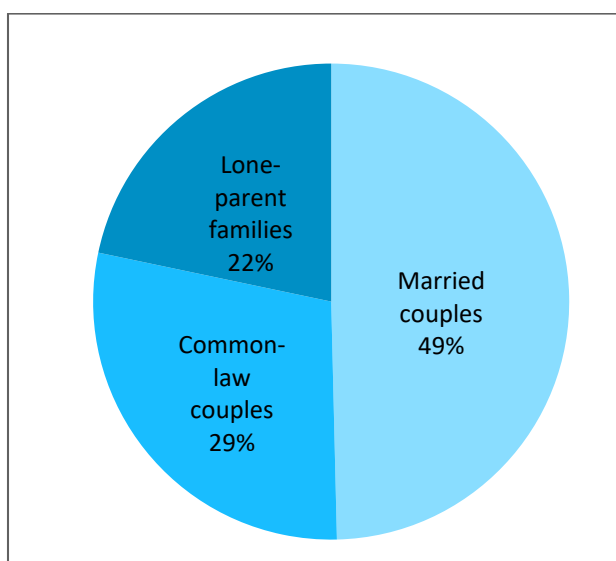


Figure 7: Family Characteristics by Percentage, NWT, 2016

4.2 Social and Cultural Trends

The socio-cultural environment of the City can be understood by looking at the practices, behaviour, and diversity of its residents. Yellowknife is made up of residents coming from a variety of backgrounds, which is particularly evident when looking at the range of ethnicities, knowledge of languages, and religious affiliations represented in the City. Moreover, the increasing number of immigrants that are choosing Yellowknife as their home will continue to contribute to the City's diversity. The following subsections illuminate the diversity that is found within the population of Yellowknife.

4.2.1 Indigenous Profile

According to Statistics Canada, 1,673,785 people identify themselves as an Indigenous person in Canada. These Indigenous peoples identify three distinct groups, First Nations (defined as North American Aboriginal Peoples by Statistics Canada), Metis, and Inuit, each with unique histories, languages and cultural practices.

In the NWT there are seven regional Indigenous Governments: 1) Akaitcho Territory Government; 2) Dehcho First Nations; 3) Gwich'in Tribal Council; 4) Inuvialuit Regional Corporation; 5) Northwest Territory Métis Nation; 6) Sahtu Secretariat Incorporated; and 7) The Tłı̨chǫ Government. There are also four Community Based Governments: 1) Kátł'odeeche First Nation; 2) Salt River First Nation; 3) Acho Dene Ko First Nation and Fort Liard Métis Local #67; and 4) Délı̨nę Got'ı̨nę Government. As well the North Slave Métis Alliance consider the Yellowknife area to be their homelands. The City of Yellowknife and Yellowknives Dene First Nation (Member First Nation of the Akaitcho Territory Government) share boundaries and are currently undergoing land claim discussions (please refer to **section 3.1** of this report). Noting the cultural context of Yellowknife, it is important to understand the dynamics of the indigenous population in the City and the NWT.

- Yellowknife's Indigenous population is comprised primarily of First Nations peoples, with a smaller population of people who are Metis and Inuit. This is comparable to the NWT as a whole.
- The Indigenous population in Yellowknife in 2016 was not represented to the same degree as it was in the other communities in the NWT.
- The Indigenous population of Yellowknife was 22.8%, while the Indigenous population of all other communities averaged 76%.

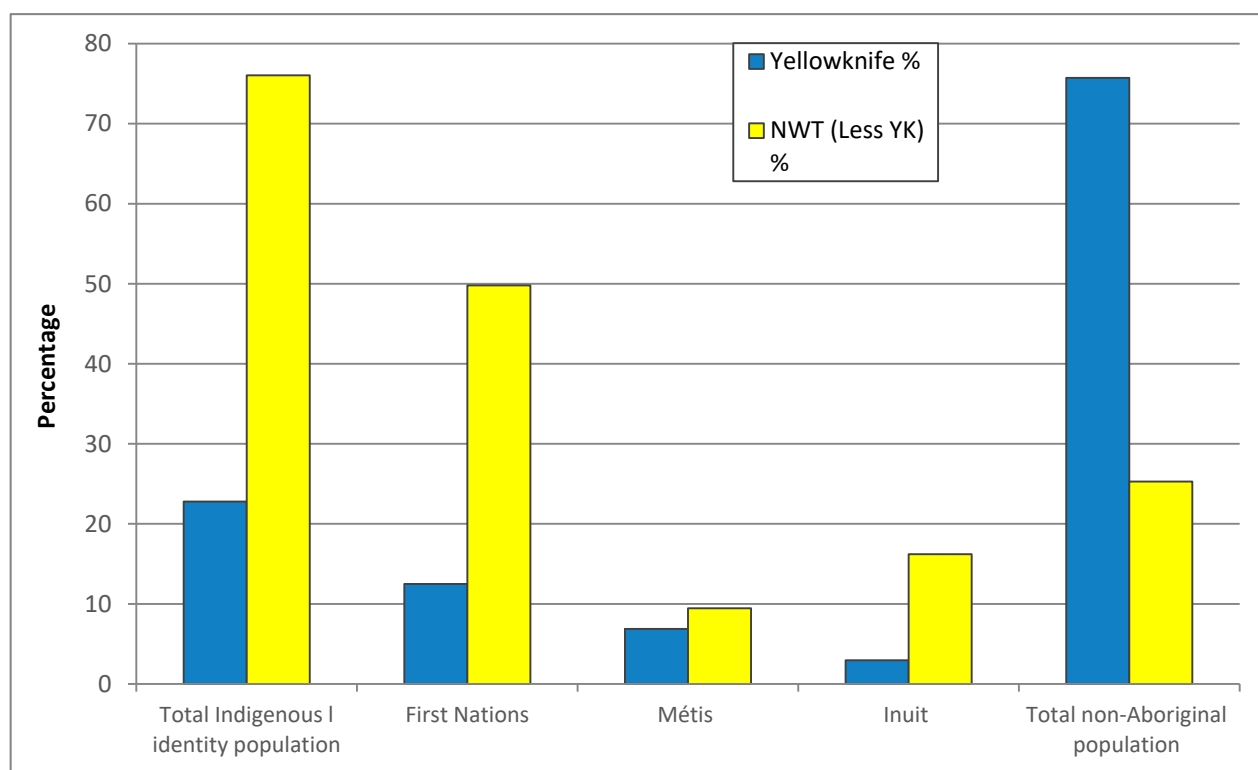


Figure 8: Indigenous Population, Yellowknife and NWT, 2016

4.2.2 Ethnicity

Ethnicity, as defined by the census, considers the ethnic or cultural origins of a person's ancestors.

Figure 9 is based on 2016 data and illustrates a snapshot of ethnicity in the City compared to the NWT.

Key findings are summarized below:

- The population of Yellowknife is ethnically diverse. Of the population with a European background, a large portion have British Isles or French origins, as depicted in **Figure 9** below, however a significant portion also report other Western European origins, such as German (20%) and Dutch (6%). Of those with Asian backgrounds, there is a significant population of nearly 1,200 individuals who report Filipino as part of their ethnic background: representing 6% of Yellowknife's total population. Of the 630 Yellowknife residents who reported African ancestry, 40% identify a Southern and East African origin, with the majority identifying Somali, Zimbabwean, Eritrean and Ugandan backgrounds.
- Compared to the Northwest Territories, Yellowknife has a smaller population with Indigenous ethnic characteristics at 23% compared to 50%, respectively. The larger percentage of those with European ethnic characteristics present in Yellowknife (62%) decreases the proportion of those with Aboriginal ethnic characteristics overall; excluding Yellowknife, 74% of Northwest Territories residents report Aboriginal origins.

- 62% of the population of Yellowknife report that they have European origins. Of those, the majority report British Isle origins, at 75%.

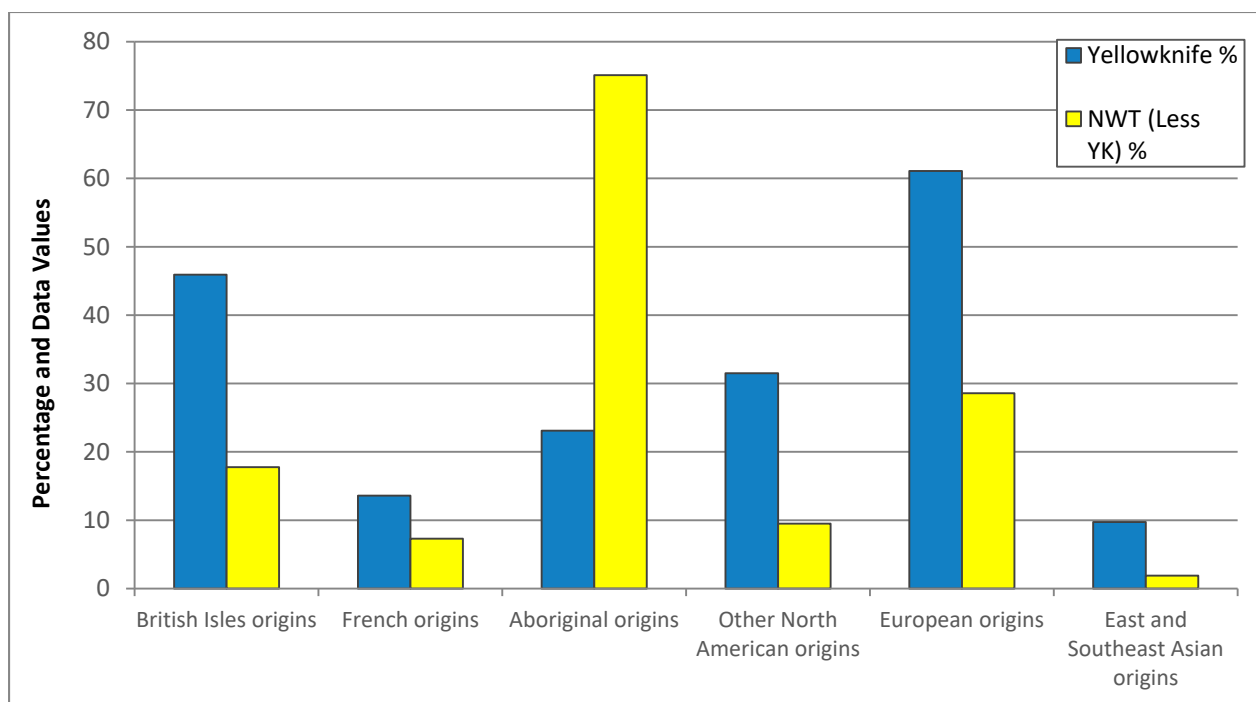


Figure 9: Ethnicity Characteristics, Yellowknife and NWT, 2016

**Note that the sum of the ethnic groups is greater than the population as people may report more than one ethnic origin.*

4.2.3 Immigration

Contributing to Yellowknife's diversity is the significant proportion of the population who are immigrants to Canada. 14.9% of the City's population are immigrants, compared to 9.0% in NWT (see **Figure 10**).

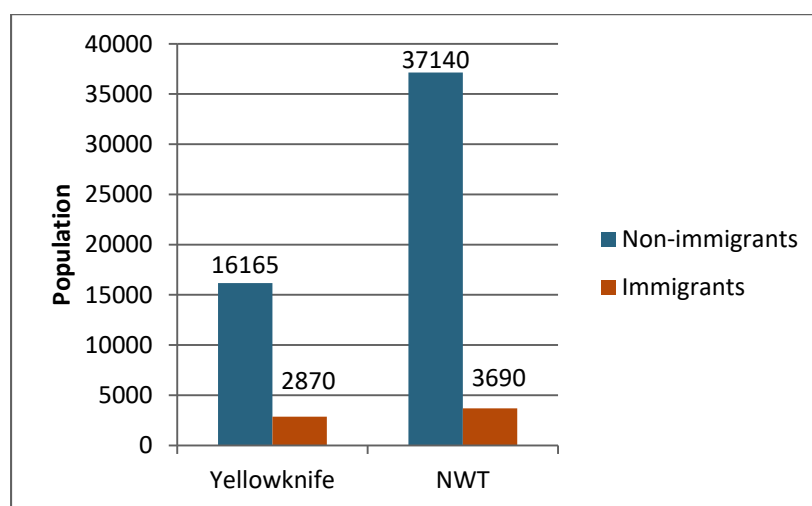


Figure 10: Immigrant Population, 2016

Immigration to the City has been steadily increasing. Recent immigration, between the years 2011 to 2016, accounts for 3.6% of Yellowknife's total population. **Figure 11** demonstrates the increasing immigration rate since 2001 in both Yellowknife and NWT.

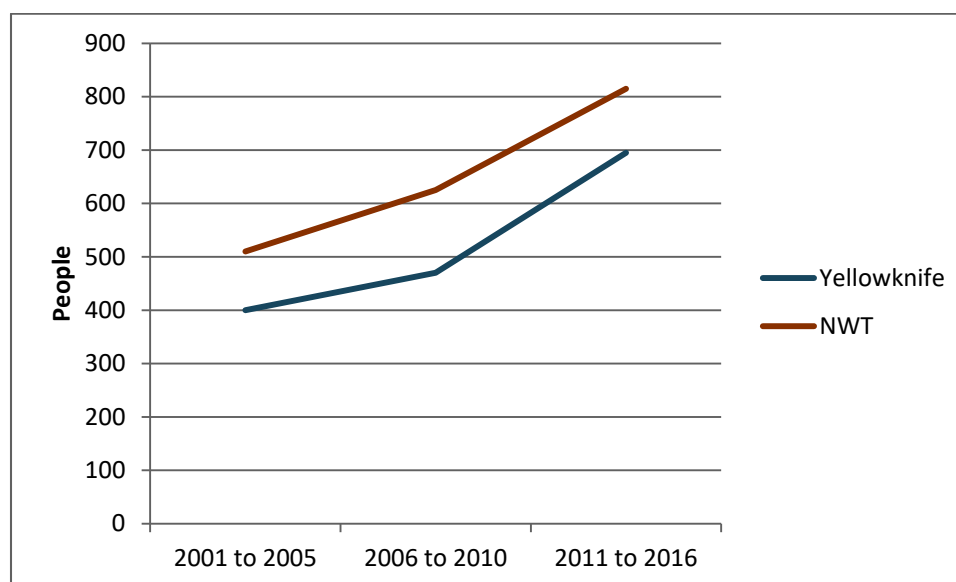


Figure 11: Immigration by Year, Yellowknife and NWT, 2001 - 2016

The largest proportion of recent immigrants (between 2011 and 2016) moved to the City from the Philippines. See **Figure 12**.

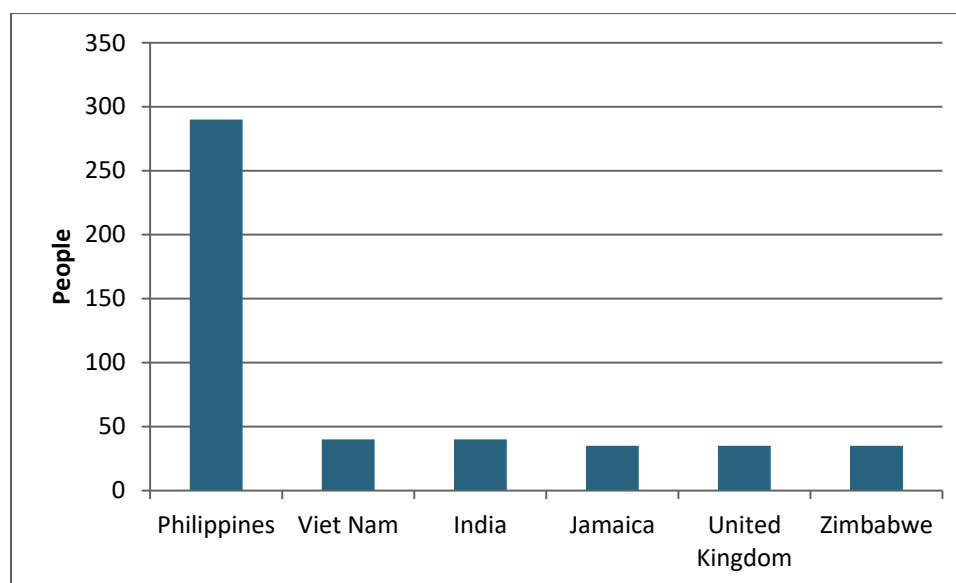


Figure 12: Recent Immigration (2011 - 2016) by Place of Birth, Yellowknife

4.2.4 Migration

The 2016 census provides data on where people are moving to and from. For the purpose of this report this is referred to as migration, even with respect to those who may have moved from one place to another within Yellowknife; note that Statistics Canada refers to this as “mobility status” in its reporting. Key findings on migration are summarized below:

- In the year leading up to the 2016 Statistics Canada Census, 80% of Yellowknife residents had not changed residences. Of those Yellowknife residents who did move, 12% moved from within the City, 6% moved from another province or territory. The remaining 2% of residents moved from within the Territory or from outside Canada. See **Figure 13**.

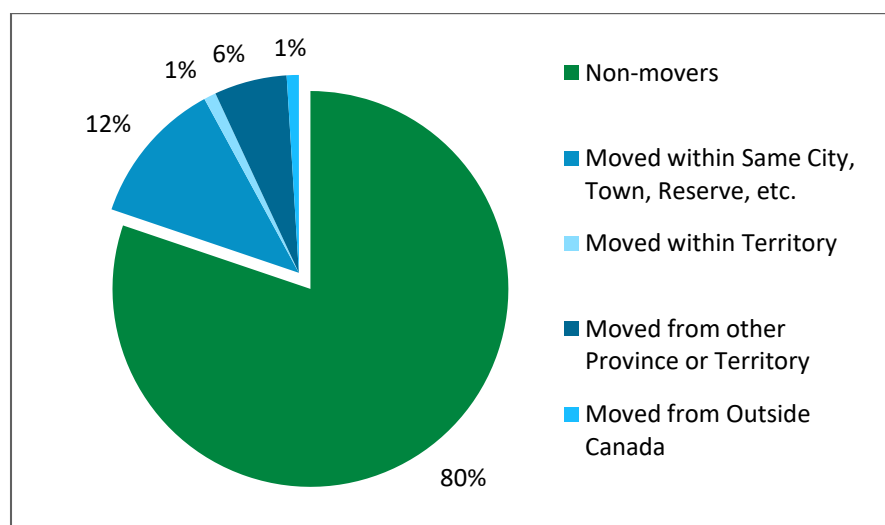


Figure 13: Migration Status, Yellowknife, 2015 (which informed the 2016 Census)

- Similarly, 83% of NWT residents did not move in the same period. Of those who did move, 9% moved within the same city, town, township, village or First Nations reserve, 5% moved from another province or territory, 2% moved from within the Territory, and 1% moved from outside Canada. See **Figure 14**.

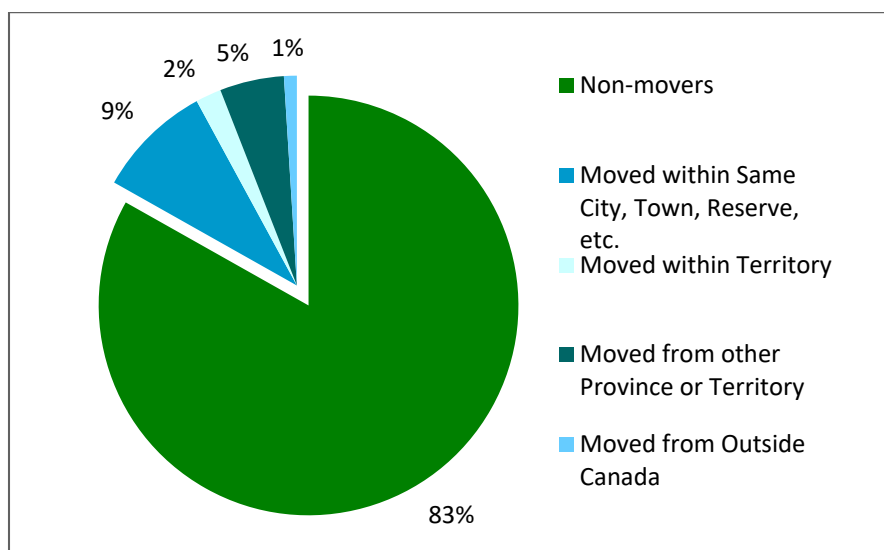


Figure 14: Migration Status, NWT, 2015 (which informed the 2016 Census)

- In the 5-year period leading up to the most recent Census, 49% of Yellowknife residents had not moved residences, 28% of Yellowknife residents moved within the City in the same period. Of those who moved to Yellowknife from outside the City, the majority came from outside the Territory; 17% of Yellowknife residents moved from another province or territory and 4% came from outside of Canada. The remaining 2% of Yellowknife residents moved from within the Territory. See **Figure 15**.

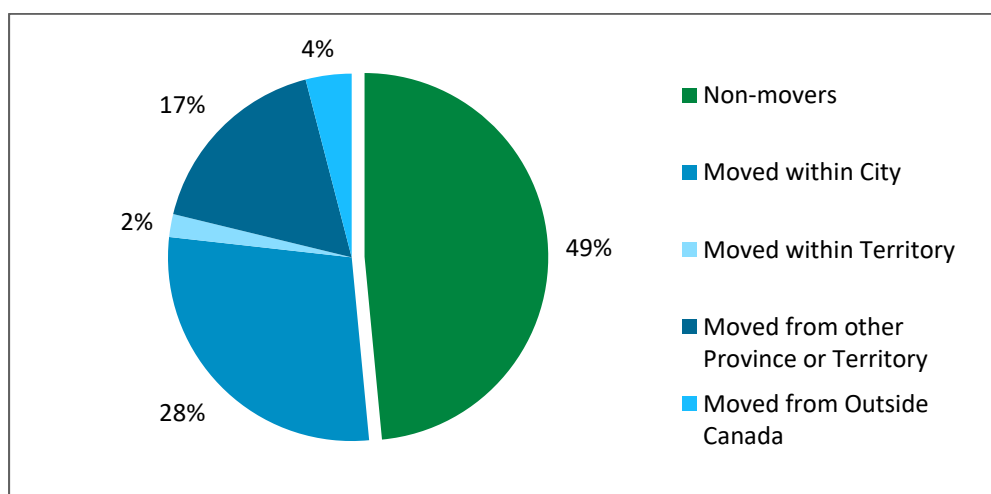


Figure 15: Migration Status, Yellowknife, 2010-2015 (which informed the 2016 Census)

- 56% of NWT residents did not move in the same time period. Of those who did move, 24% moved within the same city, town, township, village or First Nations reserve, 13% moved from another province or territory, 5% moved from within the Territory, and 2% moved from outside Canada. See **Figure 16**.

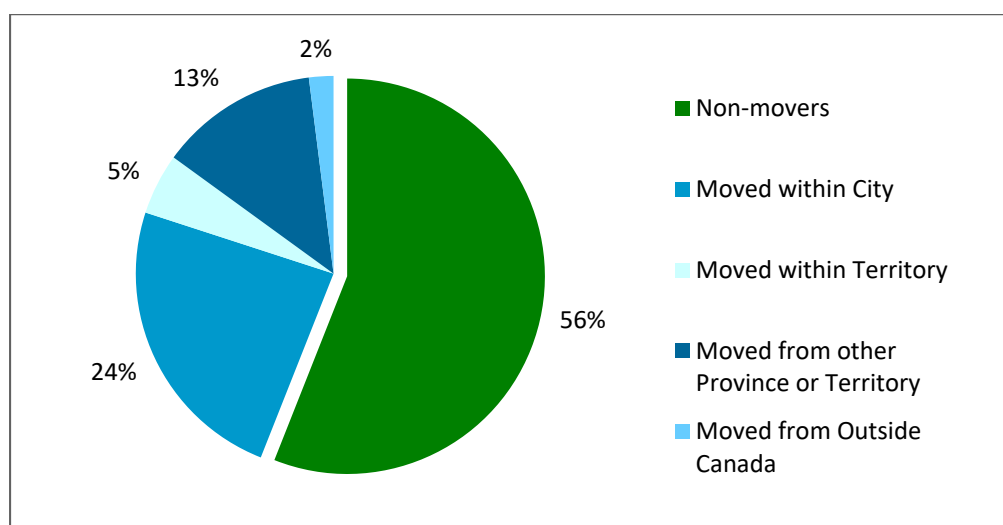


Figure 16: Migration Status, NWT, 2010-2015 (which informed the 2016 Census)

4.2.5 Knowledge of Official Languages

The Census recognizes the two official languages of Canada which are English and French; however, the NWT *Official Languages Act* recognizes eleven official languages, including: Chipewyan, Cree, English, French, Gwich'in, Inuinnaqtun, Inuktitut, Inuvialuktun, North Slavey, South Slavey and Tłıchǫ. The census captures data on ten of the eleven above mentioned Official Languages (Chipewyan is included with Dene) in several categories:

- Knowledge of non-official languages (whether a person can conduct a conversation in a language other than English and French);
- Mother tongue (first language learned at home and still understood); and
- Language spoken most often at home.

Figure 17 compares data on the knowledge of English and French and **Figure 18** illustrates data on the NWT Official Languages. A summary of key findings indicates that:

- The majority of residents in Yellowknife speak only English;
- Over 16% of residents in Yellowknife are bilingual which is slightly higher than that of the Northwest Territories; and
- Dogrib (Tłıchǫ) is the most common Aboriginal language in Yellowknife.

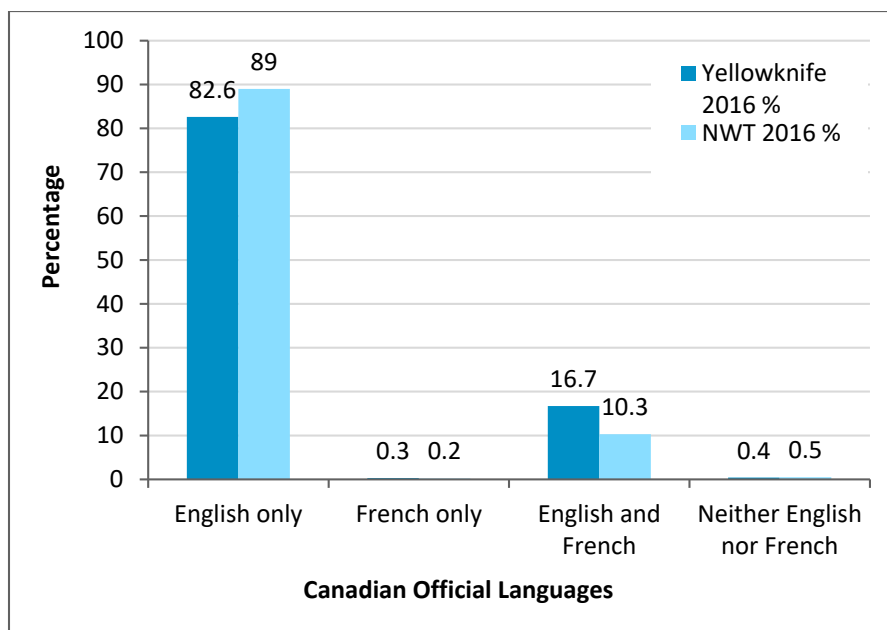


Figure 17: Knowledge of Official National Languages, Yellowknife and NWT, 2016

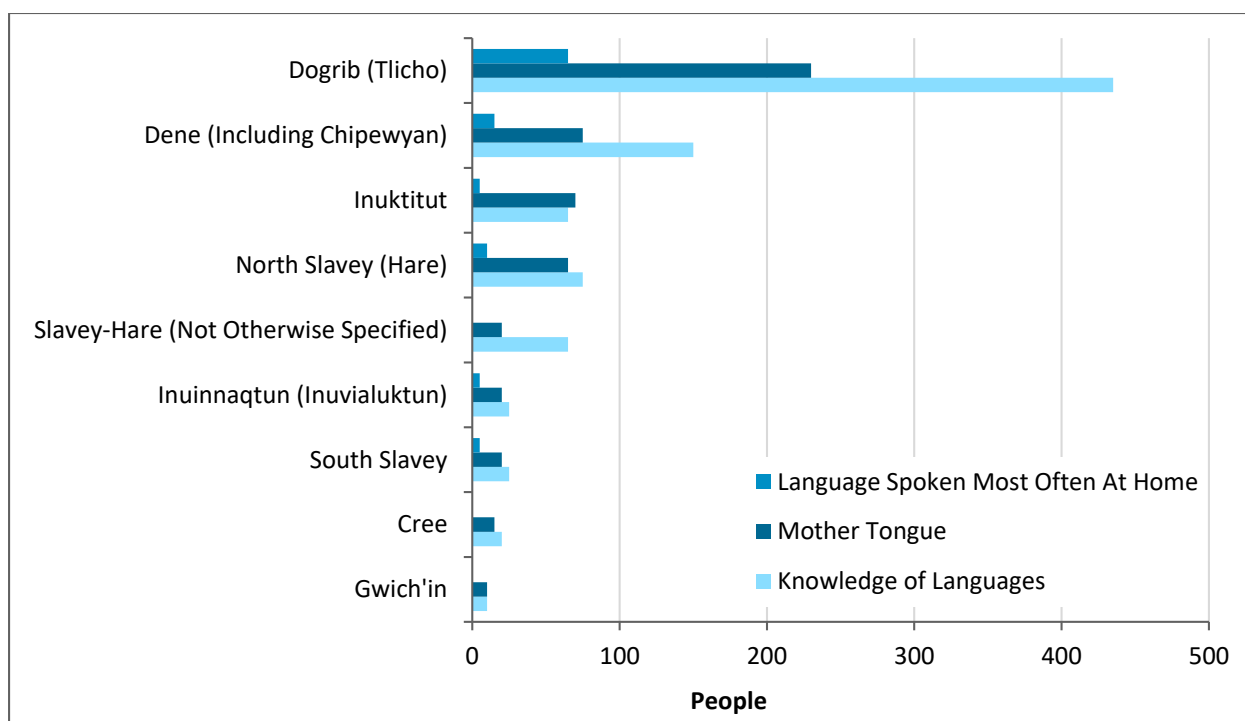


Figure 18: Knowledge of NWT Official Indigenous Languages, Yellowknife 2016

4.2.6 Religion

Statistics Canada collects data on religion every ten years. The most recent period data was collected during the 2011 National Household Survey. Religion refers to the person's self-identification as having a connection or affiliation with any religious denomination and is not limited to formal membership in a religious organization or group. Yellowknife's religious profile alongside its ethnicity characteristics and Indigenous profile depict a diverse population. A summary of findings includes:

- Over 60% of Yellowknife and NWT residents identify with Christian religions, and over 30% of both the City and Territory have no religious affiliation. The remaining population of Yellowknife residents (under 4%) largely identify with Aboriginal spirituality, Muslim, Buddhism, or other religions. A small portion identify with Hinduism, Sikh, or Judaism. See **Figure 19** and **Figure 20**.
- A larger proportion of the population of NWT identify with Aboriginal spirituality compared to Yellowknife, at 1.2% and 0.8%, respectively.

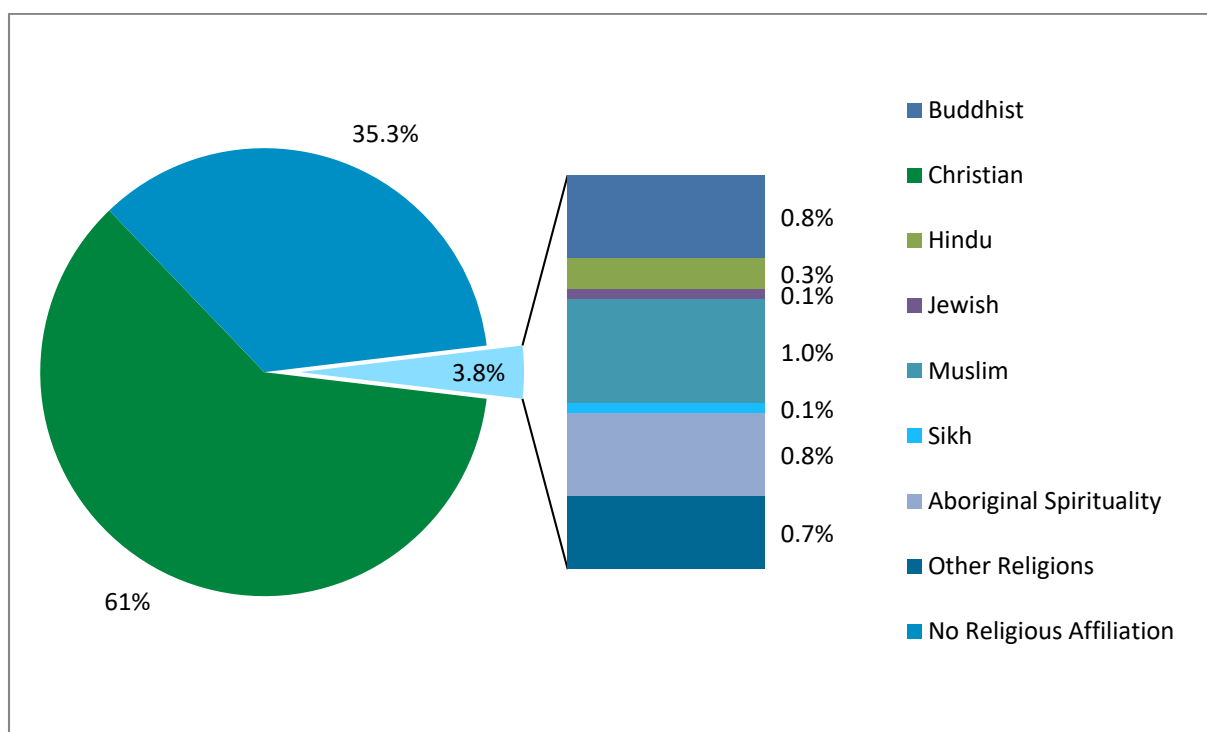


Figure 19: Religious Profile, Yellowknife, 2011

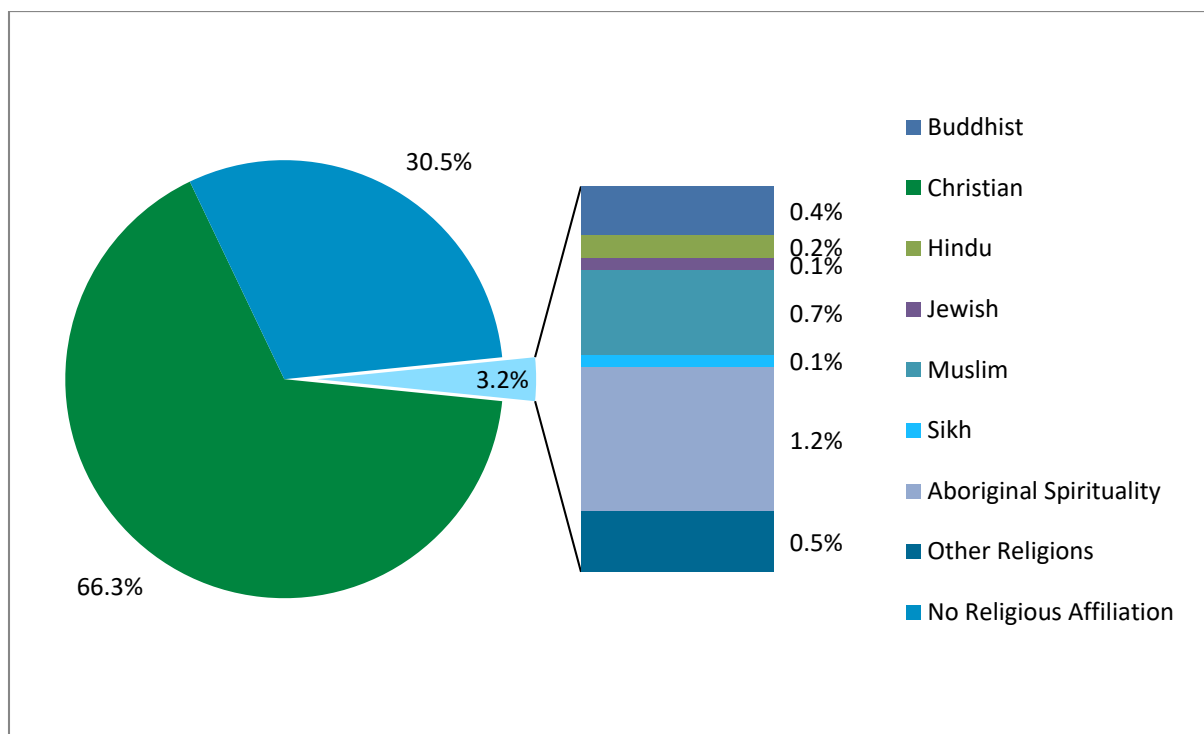


Figure 20: Religious Profile, NWT, 2011

4.3 Mobility and Transportation

Mobility refers to the movement of people and assumes that travel or trips mean a person getting from one place to another by way of one or more means of transportation such as a private vehicle or walking.

The 2016 Federal Census found that of the employed population in Yellowknife, aged 15 years or over, that nearly 60% of workers drove a private motor vehicle to work; 10.1% of workers rode in a private motor vehicle as a passenger to work; 20% walked to work; 2.4% rode a bicycle to work; 1.8% took public transit to work; and 5.9% used another method. Rates nationally were 74%, 5.4%, 5.5%, 1.4%, and 12.4%. Yellowknife has much higher rates of active transportation due to its high urban density and walkability. Transit use lags national averages however and rates of walking and biking have been declining over past censuses.

4.3.1 Licenced Drivers and Registered Vehicles

Figure 21 shows the number of licensed drivers registered with the Government of the Northwest Territories Department of Infrastructure, Driver and Vehicle Licencing Compliance and Licencing Division in Yellowknife.

- Since 2012, despite the steady increase in registered vehicles in Yellowknife (+11%) and in the Northwest Territories (+12%), the total number of collisions in both locations has decreased by 22%.

- In 2016 approximately 76% of the Yellowknife population were licenced drivers. This is a marginal increase from 2006 at 73% and 2011 at 71%.
- In 2004 there was 14,465 registered vehicles in Yellowknife, which has been steadily increasing, and there are now 21,390 in 2016.
- These trends are similar to the NWT. **Figure 22** illustrates the licenced drivers and registered vehicles in the NWT.

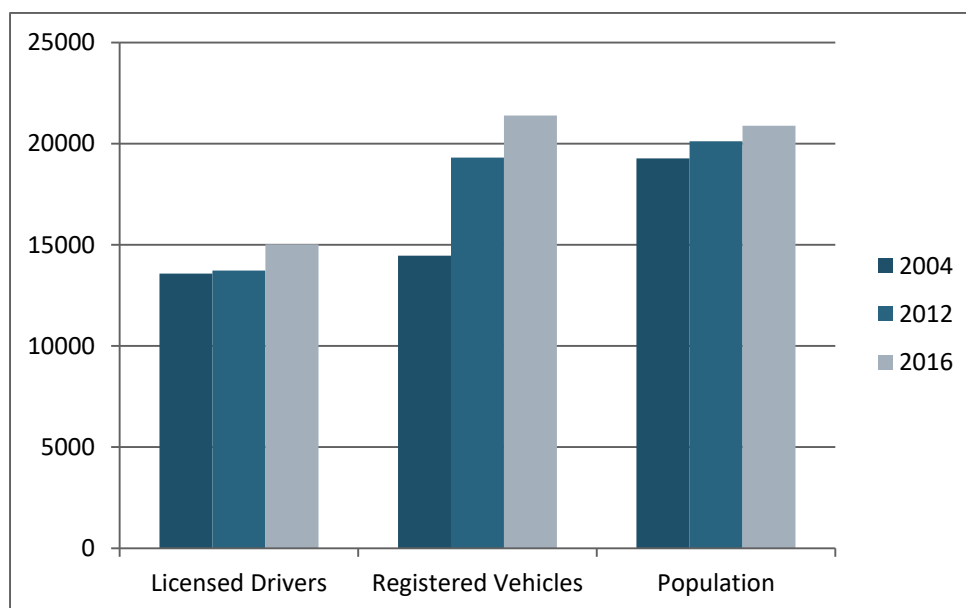


Figure 21: Licensed Drivers and Registered Vehicles in Yellowknife

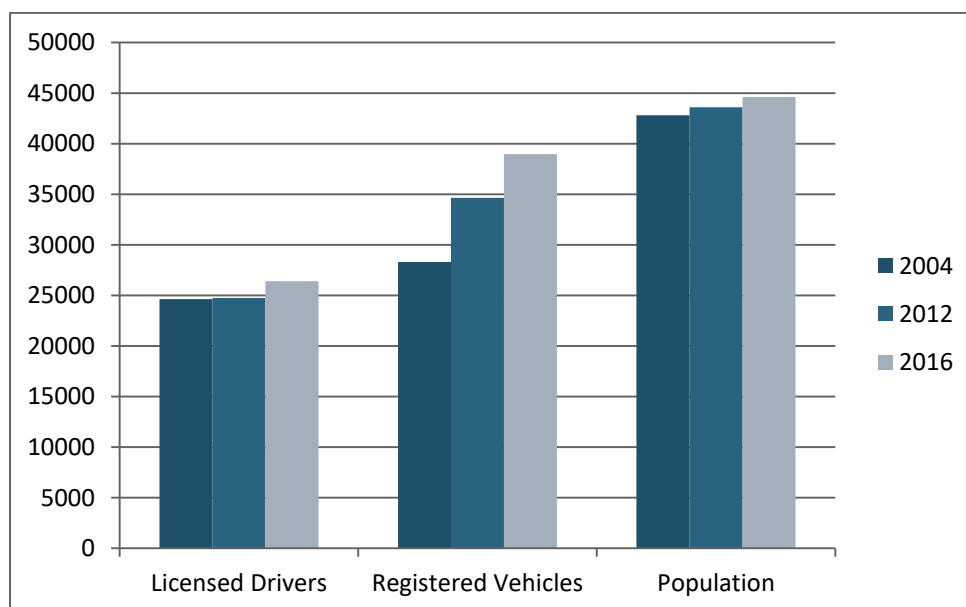


Figure 22: Licensed Drivers and Registered Vehicles in the NWT

Figure 23 illustrates the average number of vehicles registered per person, registered driver and household in Yellowknife, the NWT, and Canada.

- The number of vehicles per household in Yellowknife is over double the national average. The City averages three vehicles per household in comparison to the Canadian average of 1.47. This may be due to the prevalence of snowmobiles and all-terrain vehicles used as alternative modes of transportation for accessing the land.

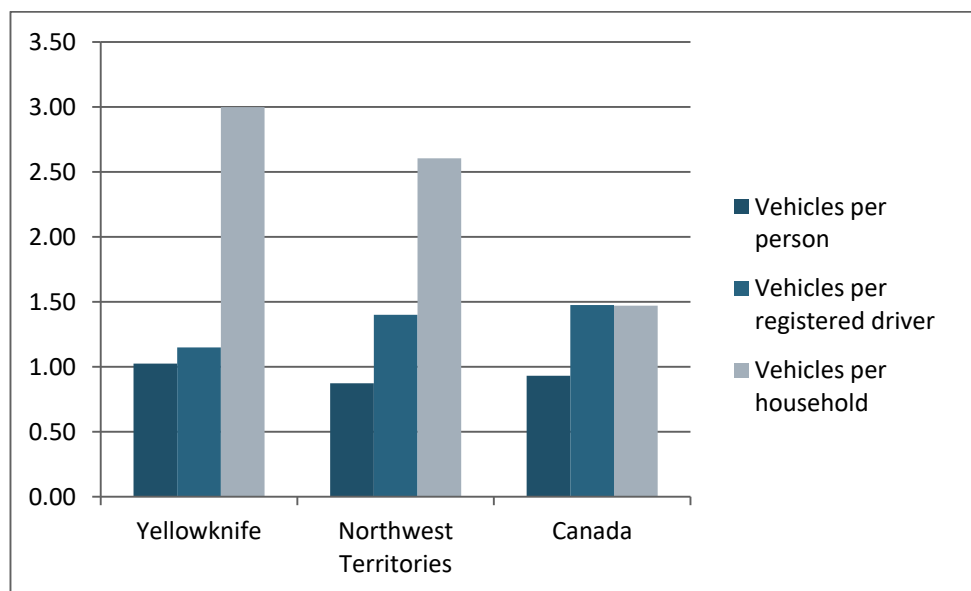


Figure 23: Registered Vehicles in Yellowknife, NWT, and Canada

4.4 Collisions

A car accident, also referred to as a “traffic collision,” or a “motor vehicle accident,” occurs when a motor vehicle strikes or collides another vehicle, a stationary object, a pedestrian, or an animal. While some car accidents result only in property damage, others result in severe injuries or death. **Figure 24** illustrates the reported collisions in Yellowknife:

- Total vehicle collisions are down by approximately 22% since 2004; and
- Personal injury and fatalities are very low, likely due to the lower speed limits within the City.

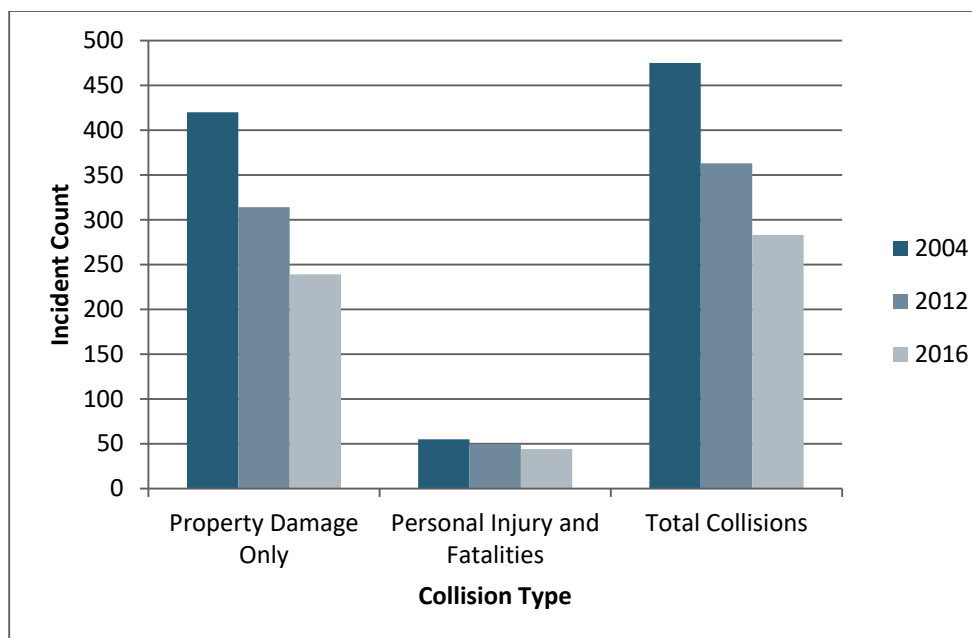


Figure 24: Number of Collisions, Yellowknife, 2004, 2012 and 2016

4.5 Crime and Security

Crime, and more so the perception of crime and security, will impact how people feel about a City. Based on the 2017 Citizen Survey, citizens feel that safety and security in the City have declined compared to previous surveys.

Incident data reported by the NWT Bureau of Statistics is reported based on the most serious crime committed, therefore an incident can represent more than one crime. Data shows that incidents of reported crime have remained generally stable in Yellowknife between 2011 and 2016 (see **Figure 25**). Further, **Figure 25** shows that while rates of total crimes are slightly higher in Yellowknife when compared with the Territorial average, the rate of crime per 1000 residents is well below national averages which were 52.2/1000 in 2016. **Figure 26** provides the total number of incidents in Yellowknife with comparison to the Northwest Territories, between 2011 and 2017. Total crimes numbers have steadily declined since the last Community Plan. **Figure 27** demonstrates the percent change in the various crime incidents in both Yellowknife and NWT. Key findings show that:

- The number of crime incidents per 1,000 persons is higher in Yellowknife than the Northwest Territories, however well below national averages. In Yellowknife, crime incidents have remained generally stable between 2011 and 2016, with the lowest number of incidents occurring in 2016;
- The most common incident type in Yellowknife is property crimes, which includes such things as breaking and entering, theft, mischief, and arson. Incidents of these crimes have declined in number since 2015;

- Following property crimes, the next most frequent incidents are other criminal code violations, which include violations such as disturbing the peace, and the administration of justice (e.g. breach of probation). Incidents of these crimes have also declined since 2015; and
- The Northwest Territories has seen a decrease in total crime since 2011. Crime in Yellowknife has also decreased over the same period, with an exception being violent crimes and property crimes, which have both increased by 4.4%.

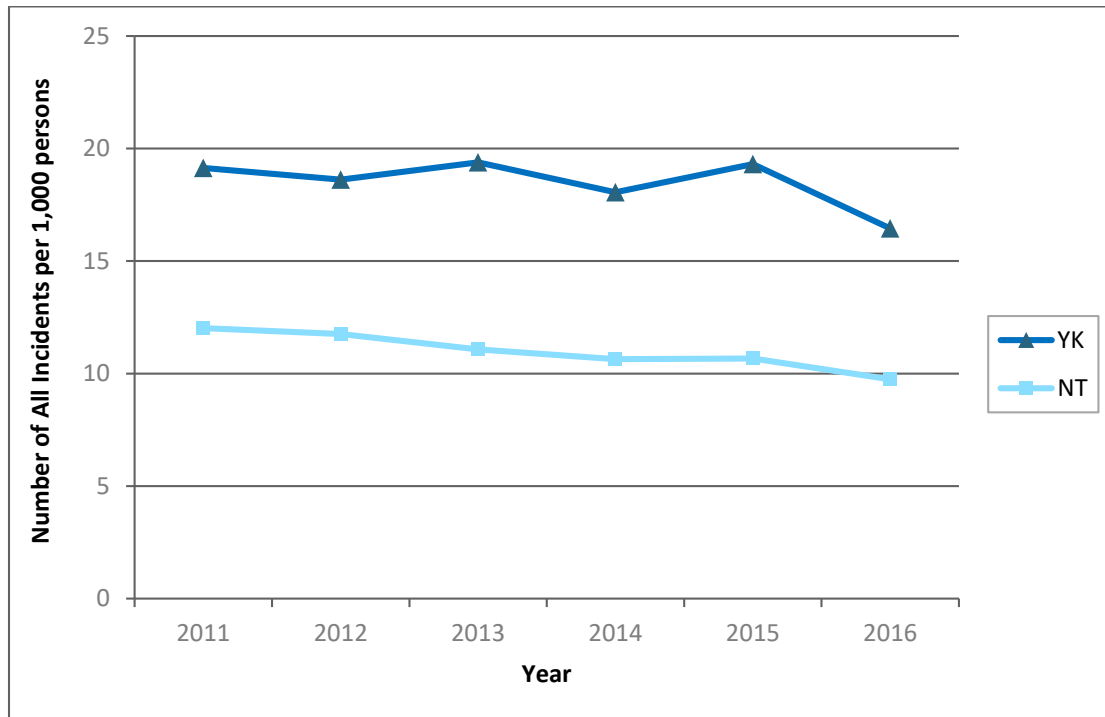


Figure 25: Number of Incidents per 1,000 Persons, Yellowknife and NWT 2011-2016

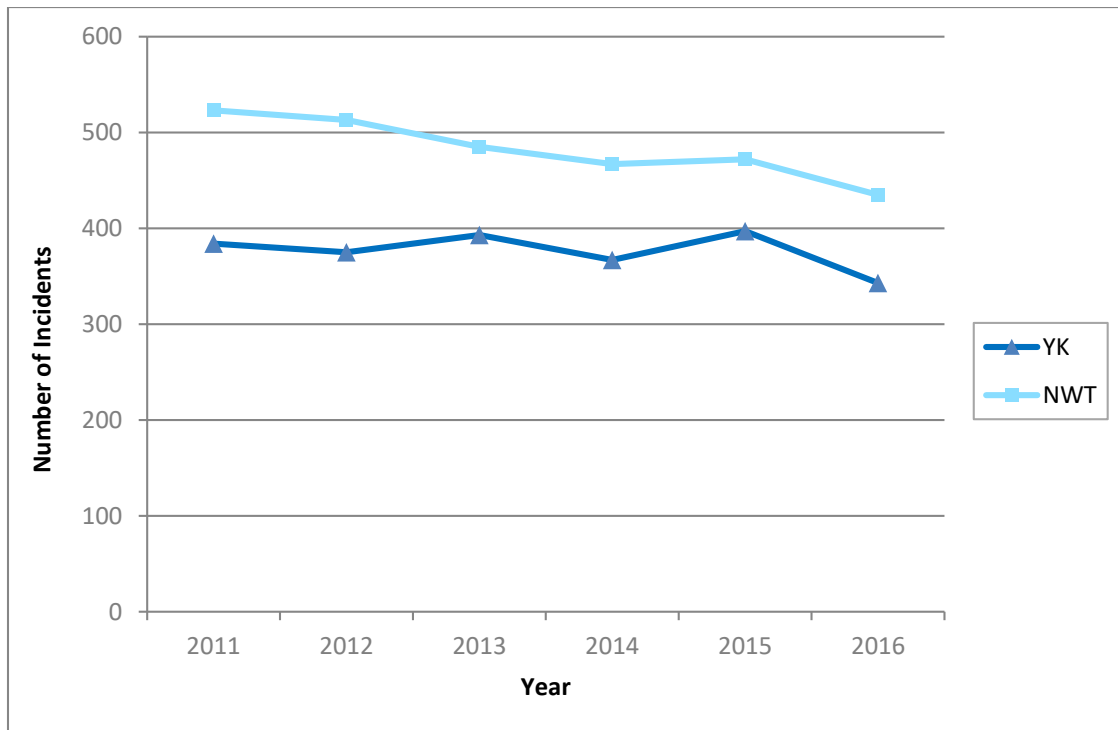


Figure 26: Number of Incidents, Yellowknife, 2011-2016

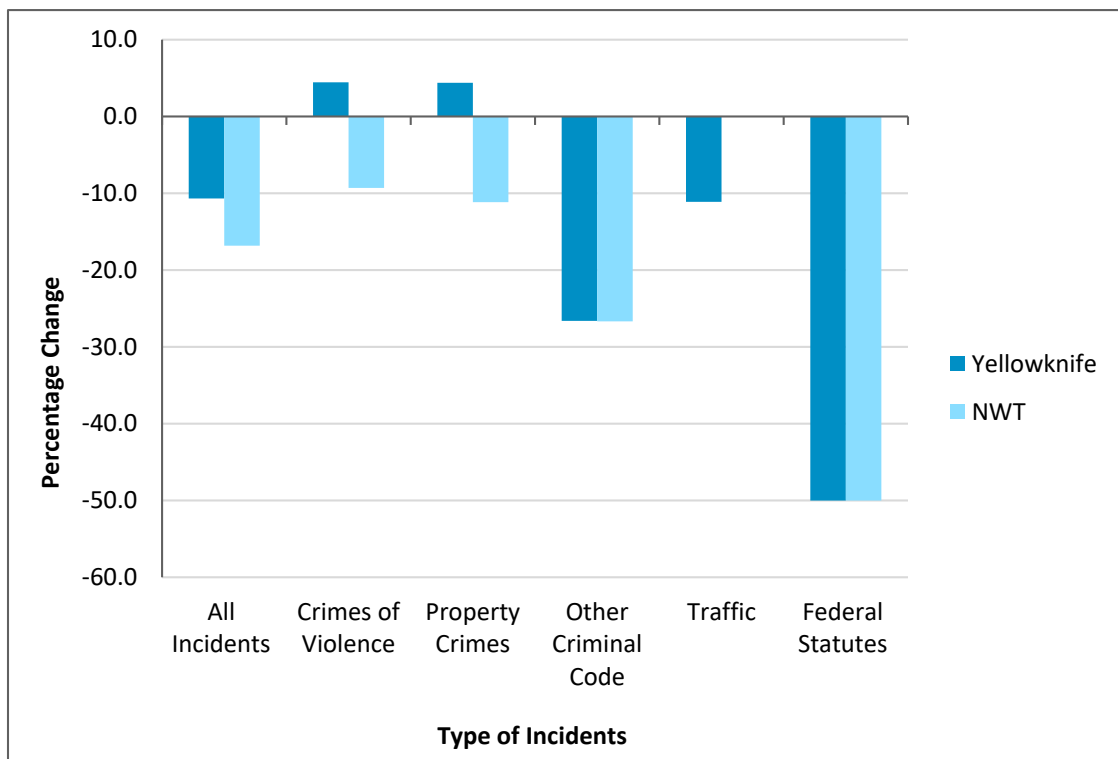


Figure 27: Change of Incidents per 1000 Persons, Yellowknife and NT, 2011-2016

In 2016, the Yellowknife RCMP altered their practice of enforcing public intoxication, and transferred the response for such instances to local not-for-profit agencies, which initiated local discussion on how such matters should best be approached. A variety of community groups including the Yellowknife Women's Society, their programming which includes the Centre for Northern Families, Housing First, Street Outreach, Work Ready, and Common Ground in addition to the efforts of the Side Door Resource Centre, YWCA, and Salvation Army have responded in providing solutions to this mental health and social issue.

Social initiatives to support Yellowknife's vulnerable citizens have had a positive impact on policing services resulting in fewer calls for service overall, and fewer calls for service for social disorder occurrences. Social disorder occurrences include disturbance, mischief, and calls associated with the *Liquor Act*; these calls amount to approximately half of all yearly calls received by the Yellowknife RCMP Detachment. It is important to note that public intoxication, criminal activity and homelessness are not causally related; however, community rates of these issues may be correlated due to the preceding causes of each distinct social issue.

Figure 28 shows the reduction in calls made to the Yellowknife's RCMP Detachment between 2015 and 2017.

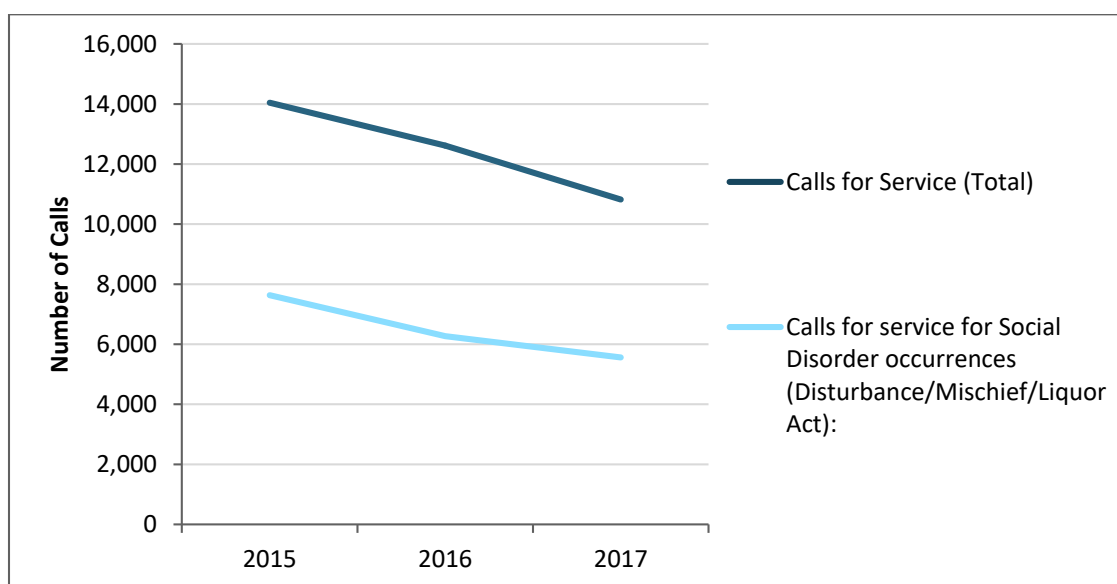


Figure 28: Number of Calls to Yellowknife's RCMP Detachment, 2015-2017

4.6 Education

The education profile of Yellowknife remained that of a well-educated population. **Figure 29** shows that education levels in Yellowknife are higher than the rest of the NWT. Key findings include:

- 61% of Yellowknife residents have had some level of education beyond high school (or equivalence), which is higher than the territorial rate at 51% (excluding Yellowknife);
- Yellowknife has a lower percentage of residents who do not possess a secondary school (or equivalence) certificate compared to NWT, at 15% and 27%, respectively; and
- Nearly 30% of Yellowknife residents possess a university certificate, diploma or degree at a bachelor level or above, compared to 20% at the territorial level.

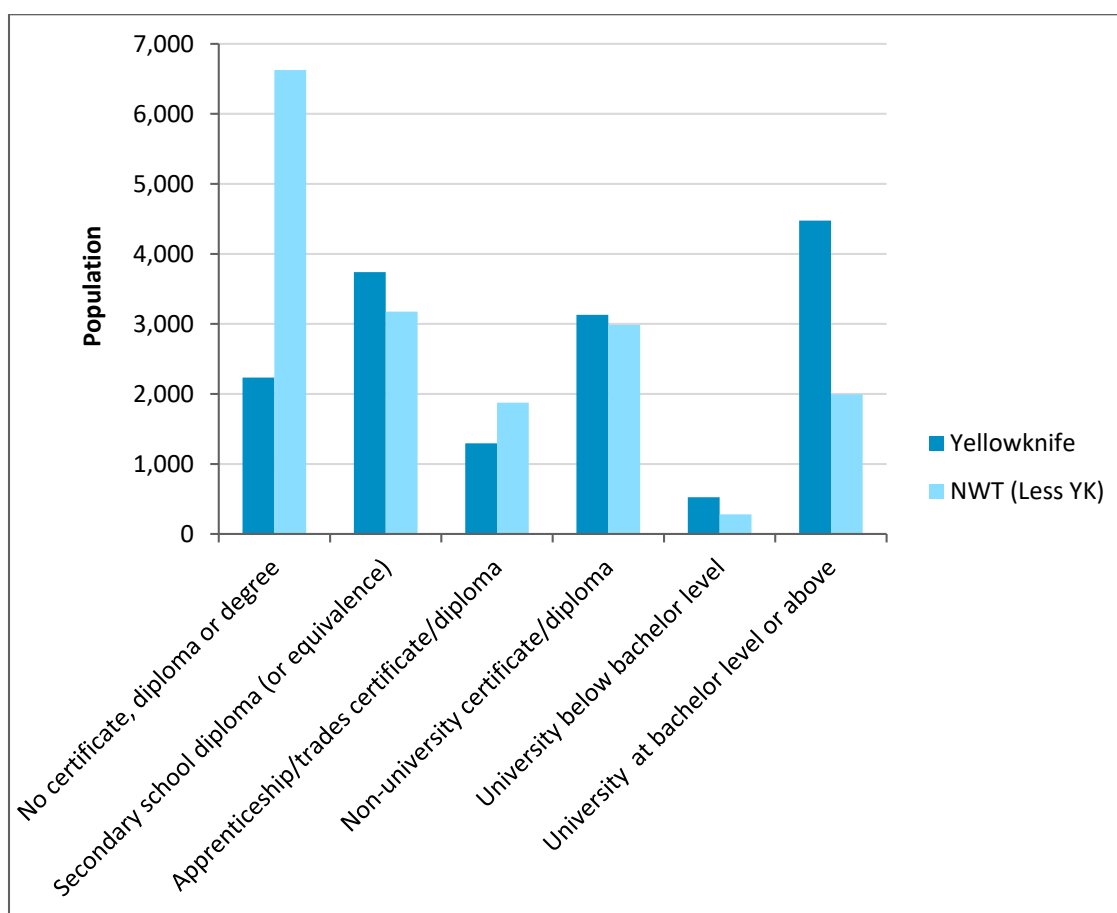


Figure 29: Highest Level of Education Attained, Yellowknife and NWT, 2016

4.7 Employment and Labour Force

4.7.1 Labour Force Activity

Statistics Canada defines the employed as persons 15 years and older having a job or business, whereas the unemployed are without work, are available for work, and are actively seeking work. Together the unemployed and the employed constitute the labour force. **Figure 30** illustrates the percentage of employment in Yellowknife and the NWT. Key findings include:

- The unemployment rate is lower in Yellowknife compared to the NWT at 5.9% and 10.6%, respectively;
- Between 2015 and 2016 employment in the City increased 2.7% despite a 30% decrease in territorial mine production in the same period. The increase in employment was largely due to an increase in public sector employment, which declined again in 2017 as the GNWT reduced its workforce by amalgamating departments. Most of the reduction in 1,200 public employees appears to have occurred outside of Yellowknife (CMHC, 2017 and 2018);
- Note that the figure below represents a 25% sample of only the population aged 15 years and older and considered to be “in the labour force” by Statistics Canada; and
- The 2016 Census reported that the labour force participation rate was 82.5% in Yellowknife and 74.1% in the Northwest Territories.

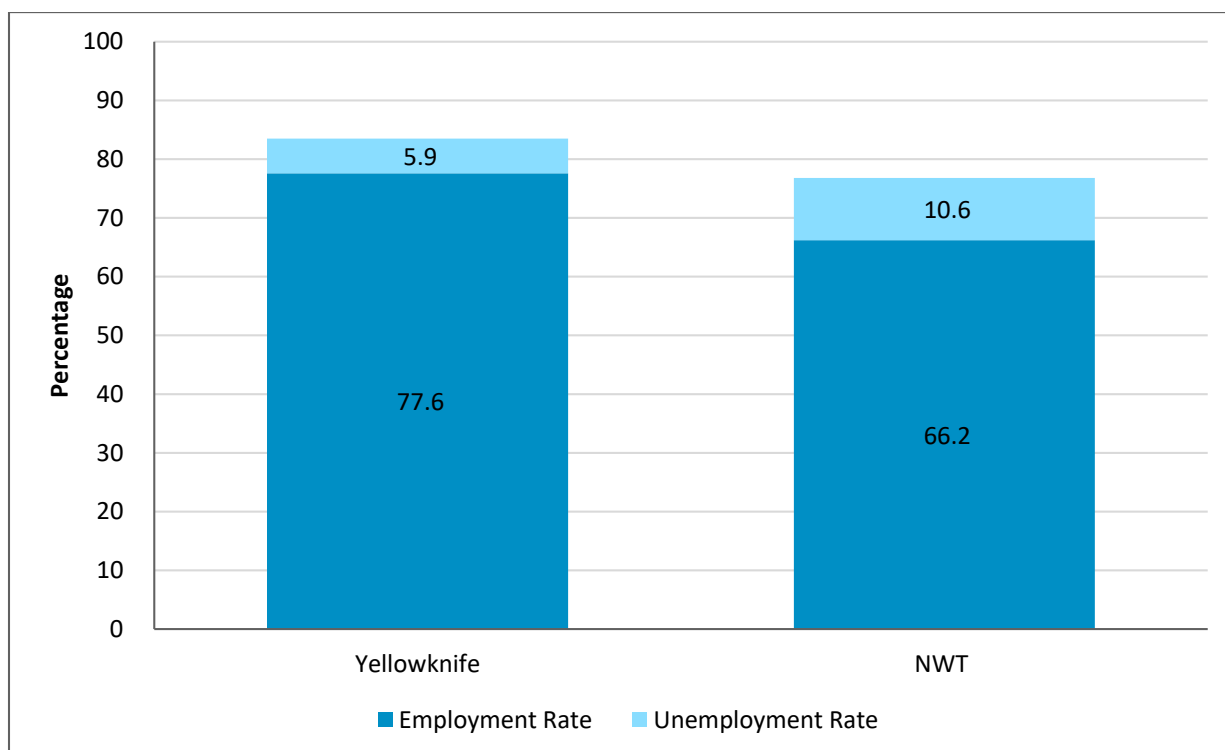


Figure 30: Labour Force Status, Yellowknife, NWT, 2016

4.7.2 Employment by Industry

The data on employment by industry for Yellowknife and the NWT indicates what the major employment sectors are for residents. This provides perspective on economic development opportunities and challenges that the City may face. Key findings include:

- Public administration is currently the largest employment industry in both Yellowknife and NWT, employing 26.4% of the population (aged 15 to 64) of Yellowknife and 25.8% of the population of NWT; and
- Retail trade, and health care and social assistance are the next largest employment industries from 2016 at nearly 10% each for both Yellowknife and NWT.

Figure 31 illustrates the distribution of employment by Industry for Yellowknife and NWT in 2016.

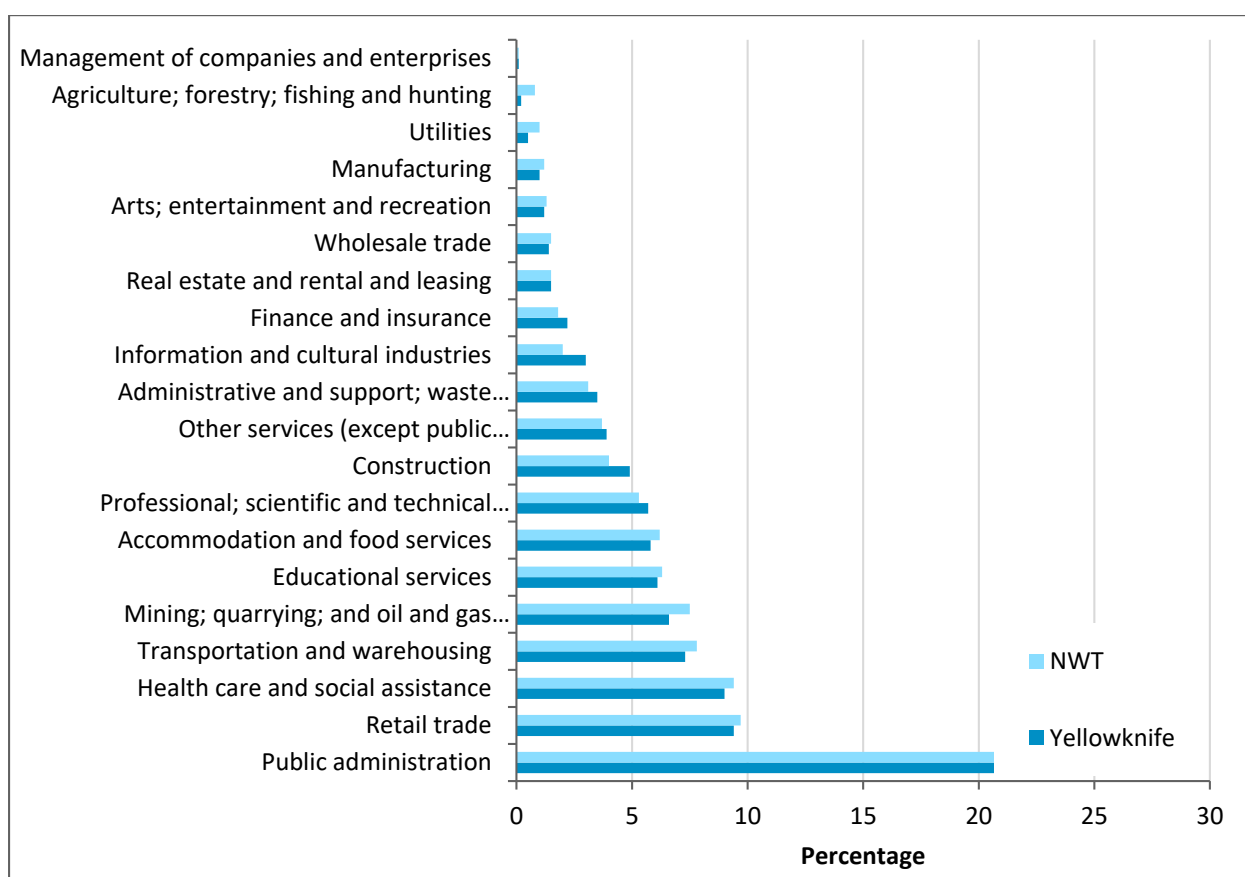


Figure 31: Distribution of Employment by Industry, Yellowknife and NWT, 2016

Further, **Figure 32** below details the average weekly earnings of these primary industries as reported for the Northwest Territories across the years 2016-2018.

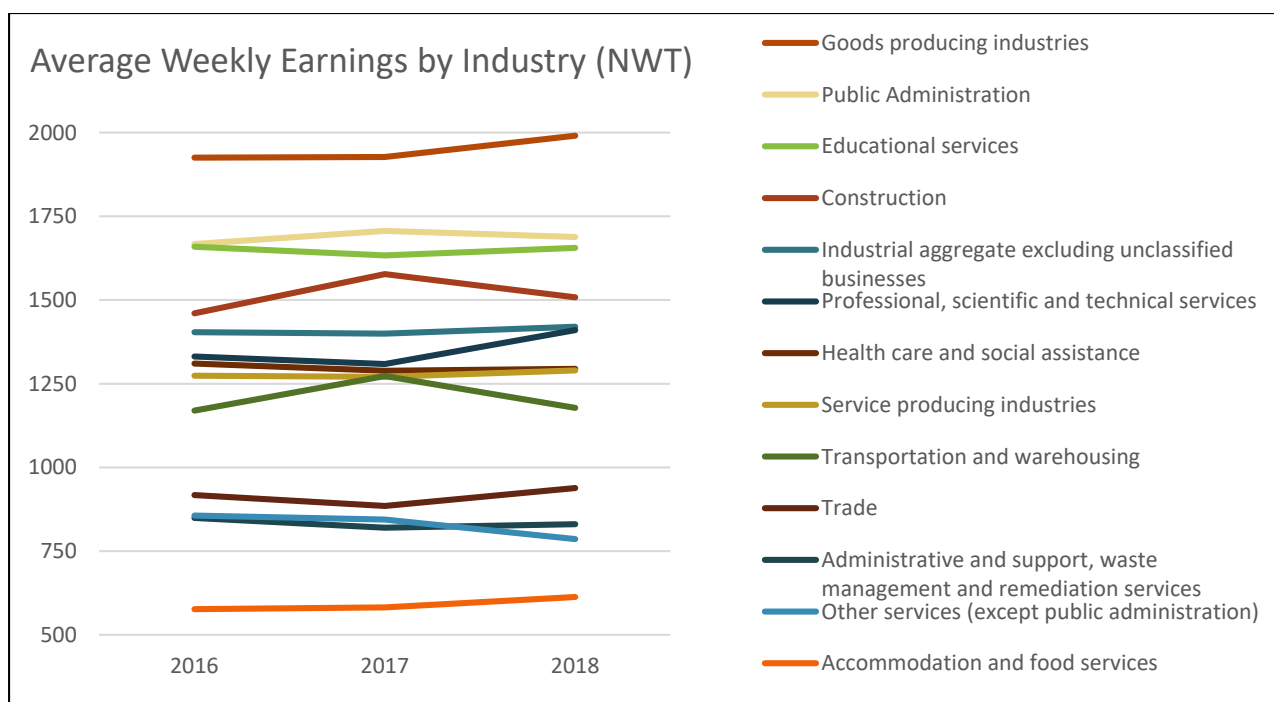


Figure 32: Average Weekly Earnings by Industry, NWT

4.7.3 Employment by Occupation

Employment by occupation provides further information regarding how residents of Yellowknife and the NWT make a living. **Figure 33** illustrates the distribution of employment by occupation in the City and the Territory, and Error! Reference source not found. and Error! Reference source not found. **35** further explore the occupational categories that have demonstrated significant change in recent years. Key findings include:

- Sales and service and business, finance and administration occupations are the two largest employment categories by occupation in Yellowknife, each representing 18.3% of the City's occupations; and
- In comparing Yellowknife to NWT the proportions of employment by occupation are quite similar. The most significant exception would be the trades, transport and equipment operators and related occupations category, which represents over 16% of NWT's employment and only 12.6% of Yellowknife's.

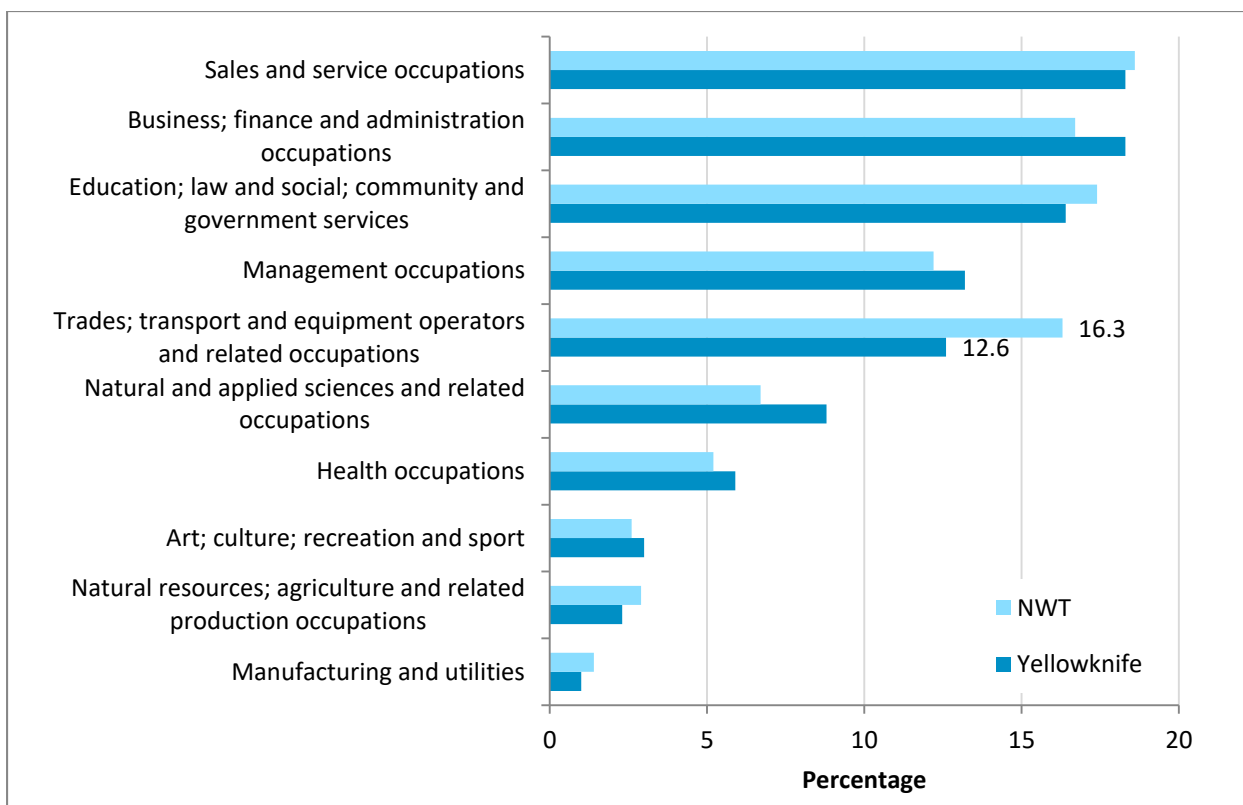


Figure 33: Distribution of Employment by Occupation, Yellowknife and NWT, 2016

The following figures illustrate the three occupation categories that have demonstrated the most significant change over the previous ten years:

- In Yellowknife occupations in sales and service, as well as the trades, transport and equipment categories demonstrated notable declines. In the same period occupations in education, law and social, community and government services demonstrated a significant increase.
- Comparing the same categories over the past ten years in NWT paints a similar picture for occupations in sales and services and occupations in education, law and social, community and government services. However, trades, transport and equipment operators, and related occupations remained relatively stable, at 20-21%, whereas Yellowknife experienced a general decline in that category. Local declines in these industries may be explained by the closure of mine (gold) operations in the City, which occurred just prior to this data being collected. Elsewhere in the territory, industrial activities have remained relatively stable, as the data would suggest over the census period being considered.

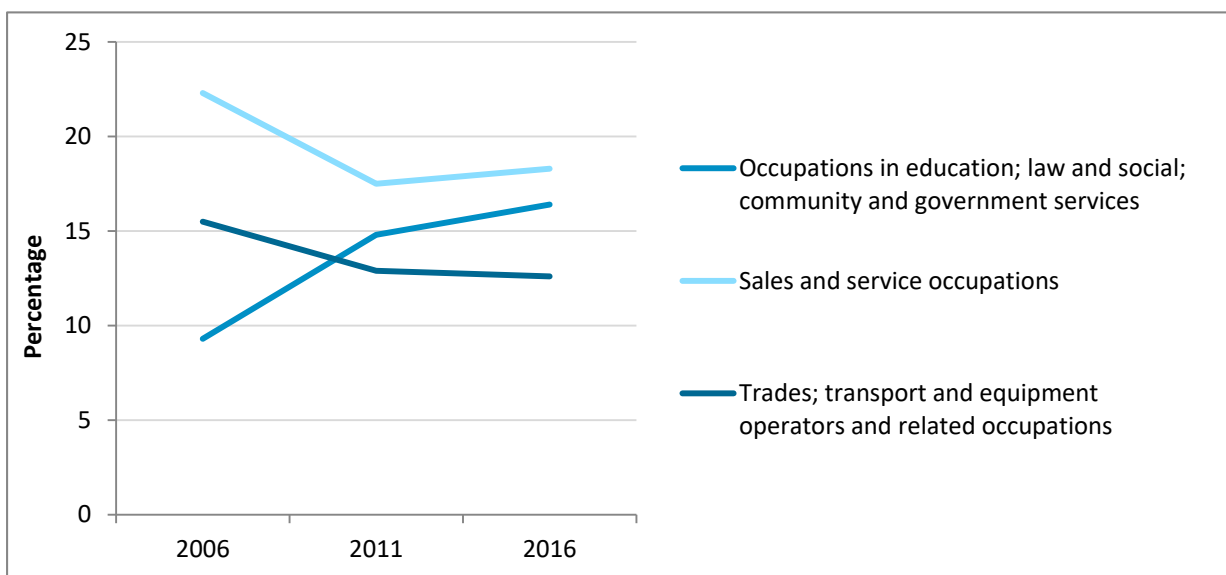


Figure 34: Occupations with Greatest Percentage Increase/Decrease between 2006 and 2016, Yellowknife

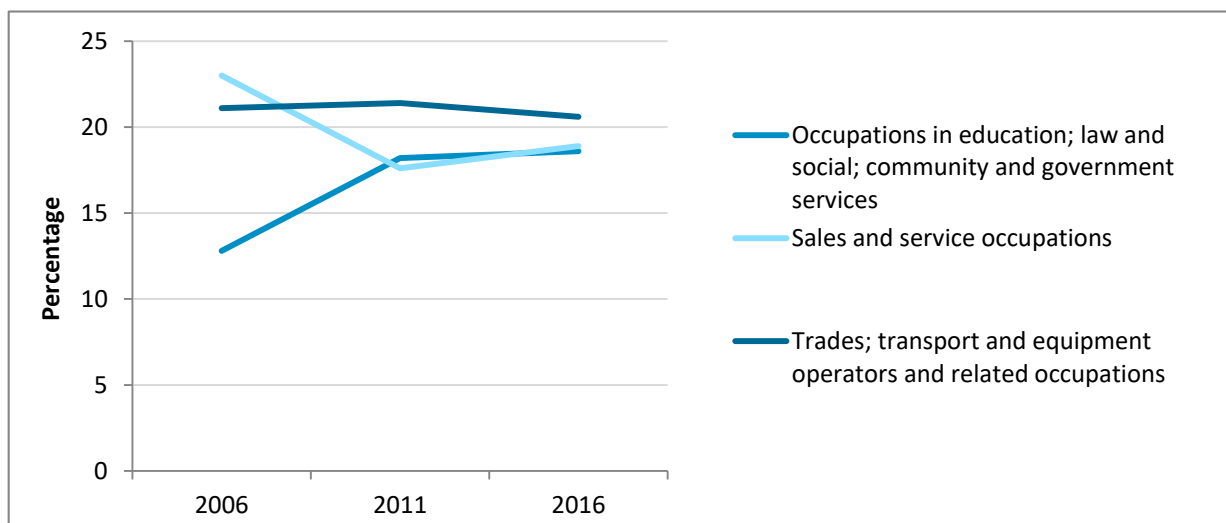


Figure 35: Occupations with Greatest Percentage of Increase/Decrease between 2006-2016, NWT

4.7.4 Business Licenses

Trends in business license data can help identify the demand for commercial space. **Figure 36** illustrates the businesses licenses issued by the City of Yellowknife between 2012 and 2018. Key findings include:

- Between 2012 and 2018 the City has experienced an overall increase in the number of business licenses that were issued;

- Most business licenses that are issued fall into the category of general business services. This category has demonstrated a significant increase since 2012, increase from 788 licenses to 1314, an increase of 67%; and
- Many of the other categories demonstrated significant increases as well, for example:
 - Hospitality, Food and Beverages: 168 to 361 licenses (115% increase);
 - Personal Services: 136 to 308 licenses (126% increase); and
 - Retail, Sales, Rentals and Services: 332 to 577 licenses (74% increase).

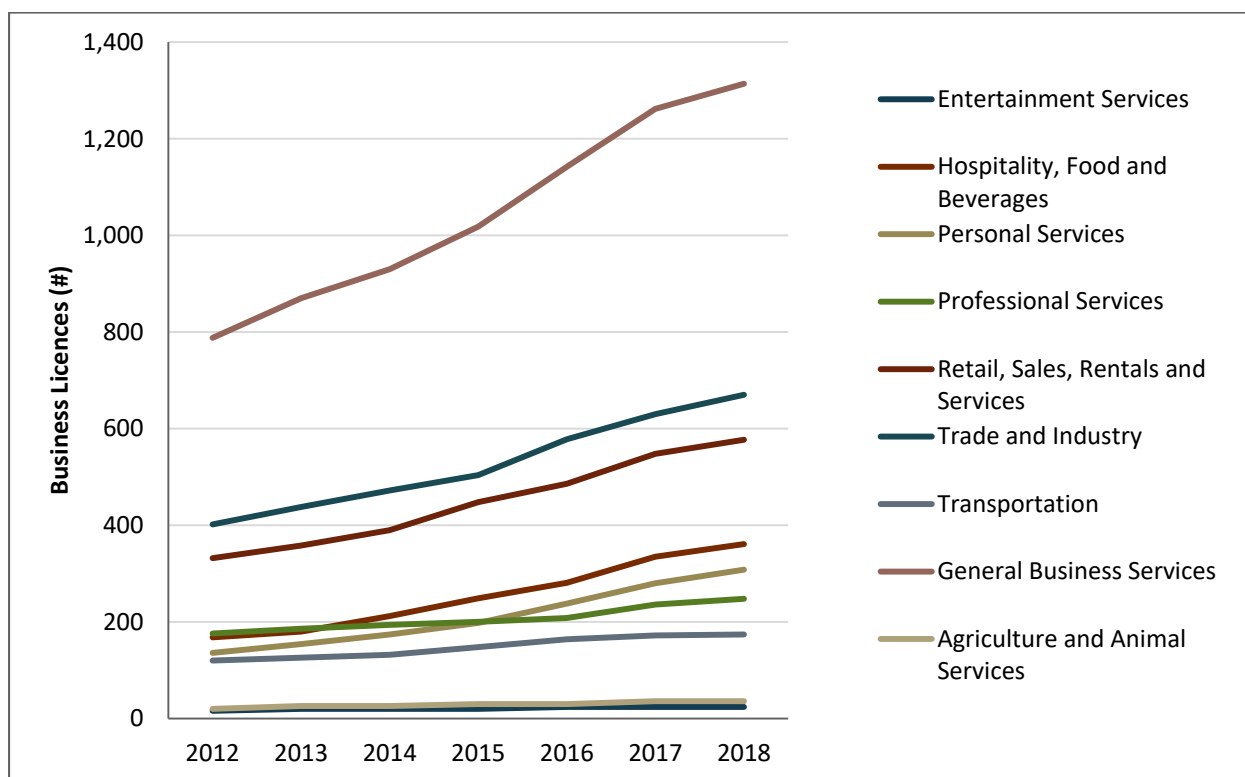


Figure 36: Business Licenses, Yellowknife, 2012-2018

4.7.5 Income

The median household income in Yellowknife is significantly higher than Canada's median household income, which in 2016 was \$142,616 in Yellowknife and \$70,336 in Canada. Median household income in the NWT in the same period was \$117,688. Median household income, along with other key findings, are highlighted in the following figures:

- Median household income increased in Yellowknife and NWT by 42% and 47%, respectively, between 2006 and 2016.

Figure 37 illustrates the median Household Income in Yellowknife and NWT between 2006 and 2016

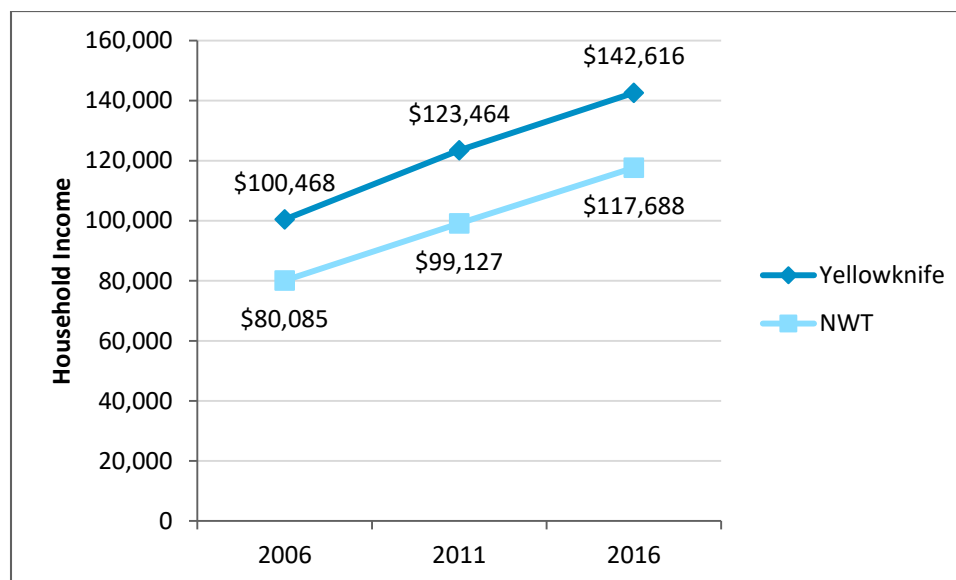


Figure 37: Median Household Income, Yellowknife and NWT, 2006-2016

- The median annual after-tax income of one-person households in Yellowknife is \$70,327, working out to \$1,352 per week, which is close to the average of \$71,621 (\$1,377 weekly).
- The median annual after-tax income of two or more person households in Yellowknife is \$139,139 (\$2,676 weekly), slightly less than double the median one-person household income. The average is \$146,713 (\$2,821 weekly), which is more than double the average one-person household income.

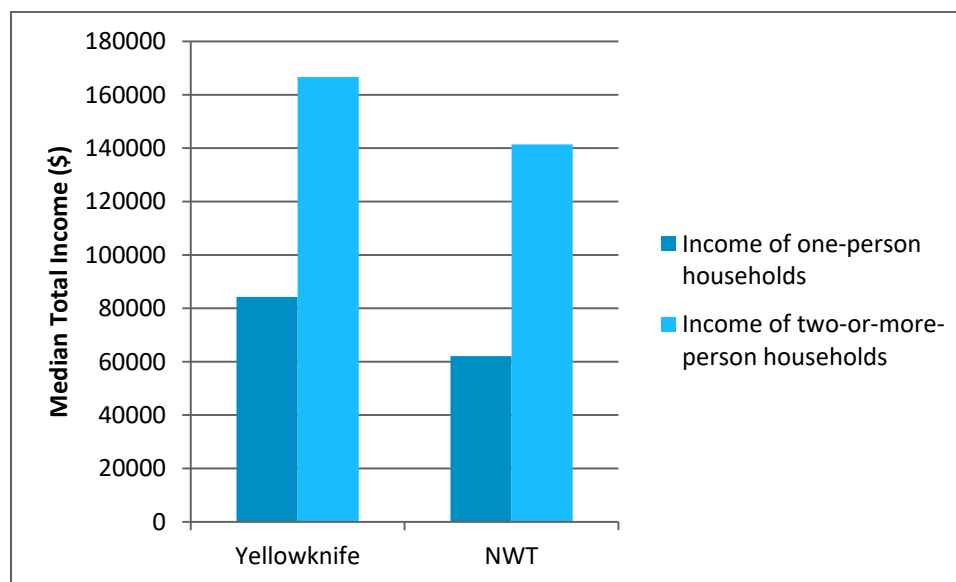


Figure 38: Median Total Income by Household Size, Yellowknife and NWT, 2015

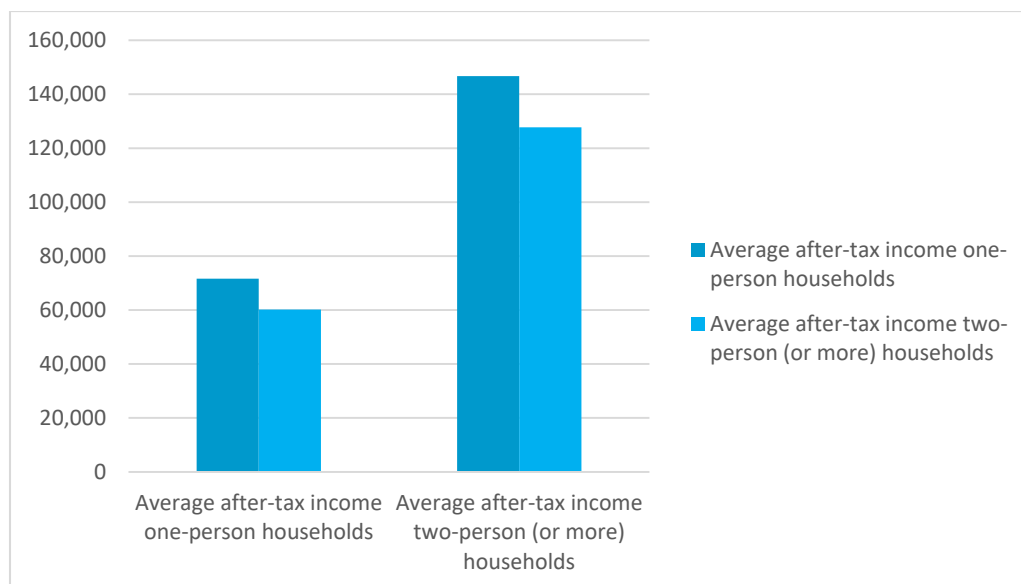


Figure 39: After-Tax Income by Household Size, Yellowknife and NWT, 2015

4.8 Household Profiles

4.8.1 Household Size

Household size refers to the number of people residing in a private household. For related information about family size, see **Section 4.1.4**. Key findings include:

- 30% of households in Yellowknife are 2 person households, which represents the majority at 2,105 households out of a total of 7,130; this is analogous of the NWT as a whole;
- The average household size in Yellowknife was 2.7 people in 2016, which is down from 2.8 in 2006. Household size in NWT has also decreased since 2006, from 2.9 people per household to 2.7; and
- Senior residents (65+) within Yellowknife represent 9.2% of primary household maintainers in 2016, compared to 13.8% in the NWT and 25.4% on average in Canada. Generally, this demographic if considered the primary maintainer would live as a two person or single household, however the low rates for Yellowknife, corroborate the idea that many live with family members in higher density household sizes.

Figure 40 illustrates the household sizes in Yellowknife and the NWT for the most recent Census year.

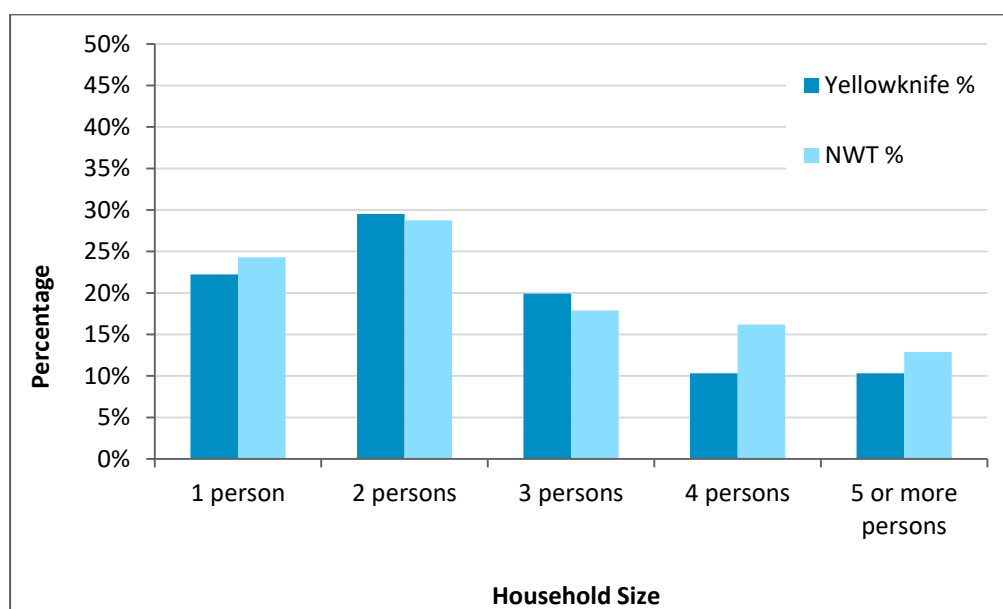


Figure 40: Household Size by Percentage, Yellowknife and NWT, 2016

In 2006 19.6% of households in Yellowknife were single-person households (1,300 household out of a total of 6,630). By 2016 the proportion increased to 22.2% of households (1,585 out of a total of 7,130). The NWT experienced a similar increase in the same time period, from 21.6% in 2006, representing 3,080 households out of a total of 14,235, to 24.3% in 2016, representing 3,640 households out of 14,980. See **Figure 41** and **Figure 42**.

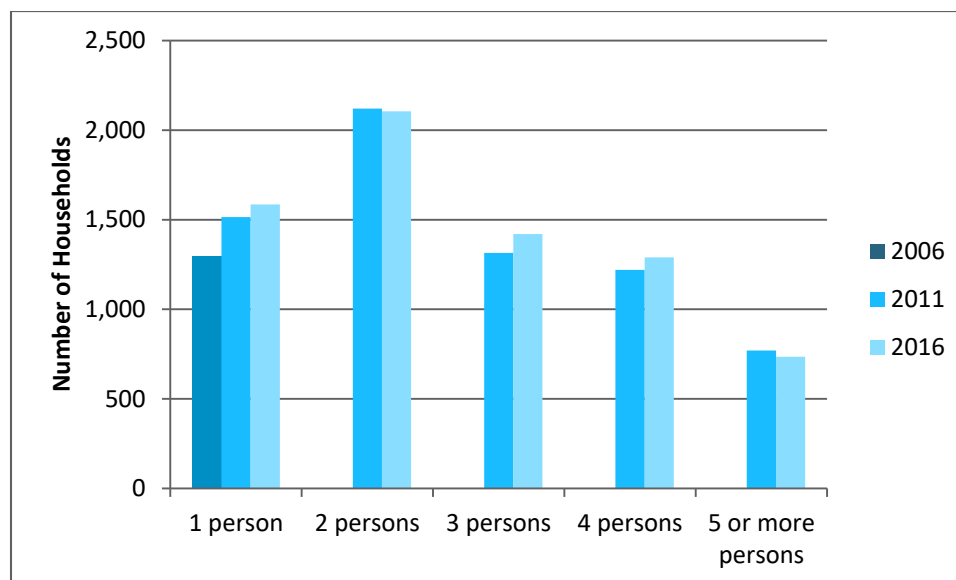


Figure 41: Household Size Change, Yellowknife, 2006-2016

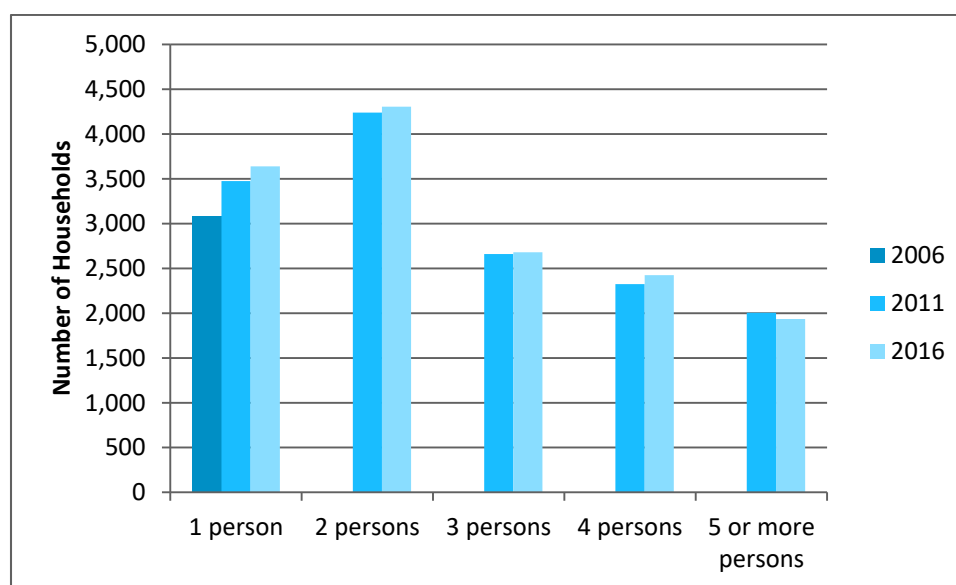


Figure 42: Household Size Change, NWT, 2006-2016

4.8.2 Housing Tenure

There are various conditions under which housing is held or occupied with the two most common being ownership and rental. Data for housing tenure in 2016 indicates that more dwellings are owned than rented in both Yellowknife and the NWT, at 56% and 52% respectively (see **Figure 43**).

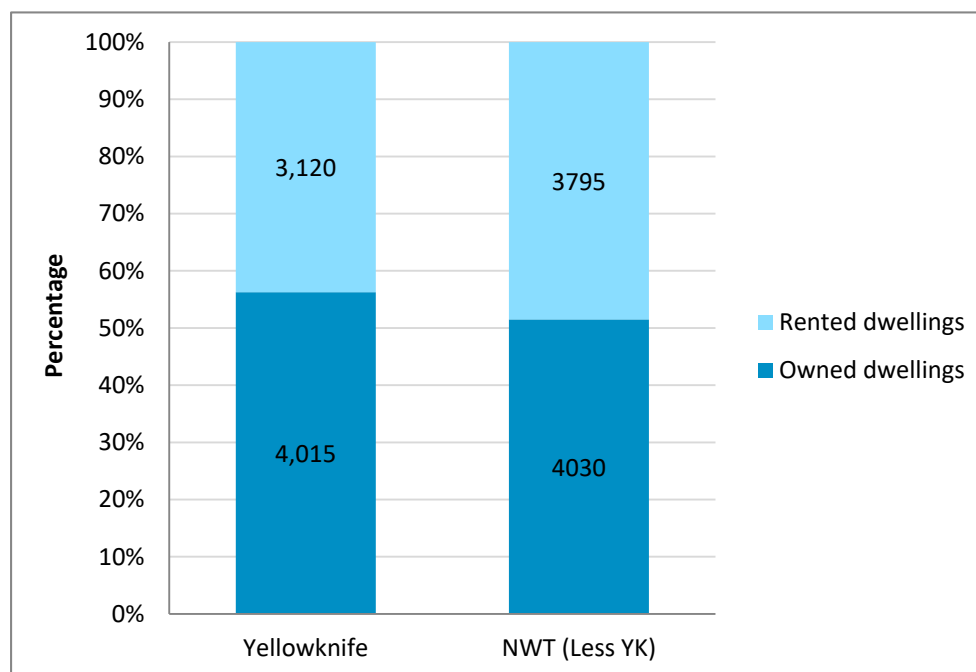


Figure 43: Dwelling Tenure, Yellowknife, NWT, 2016

4.8.3 Shelter Costs

Shelter-cost-to-income ratio refers to the proportion of a household's average total income that is spent on shelter costs. It is calculated by dividing the average monthly shelter costs by the average monthly total household income. For owned dwellings, shelter costs include, where applicable, mortgage payments, property taxes and condominium fees, as well as electricity, heat, water and other municipal services. For renter households, shelter costs include, where applicable, the rent and the costs of electricity, heat, water and other municipal services. Key findings include:

- 85% of Yellowknife residents spend less than 30% of their income on shelter costs and 15% spend more than 30%;
- 88% of NWT residents spend less than 30% of their income on shelter costs and 12% spend more than 30%; and
- 75% of Canadian residents spend less than 30% of their income on shelter costs and 24% spend more than 30%.

The above statistics are favourable for the City, and suggest that most residents have a greater financial comfort or affordability in living within the City, yet this does not provide a full image of shelter costs. CMHC reports that 71% of territorial residents can interact with the housing market without subsidy in 2015, however this proportion has declined over past years (72% in 2014), and housing stock is declining in the City as residents may be unable to afford repairs.

52% of households had one maintainer, a resident who was responsible for paying the rent, or mortgage, taxes and utilities. 42% of households had two maintainers, and only 6% had more than two maintainers. This high proportion of households reliant on one primary income supports the risks of affordability with the declining number of employment opportunities across the City and Territory.

Households earning less than \$70,000 and which pay over 30% of their income in rent are eligible for a housing subsidy, a territorial program that was expanded in 2017. This subsidizing program, in addition to other housing initiatives, seek to move low-income individuals into appropriately sized units. These programs skew the affordability statistics in the north toward appearing stronger, and yet declining resident interactions with the housing market, increasing housing values and declining economic conditions may lead to affordability issues across the north and within the City of Yellowknife.

4.8.3.1

Rental Cost

Data collected during the 2016 Census indicates that the average monthly cost for a rented dwelling, including utilities, in Yellowknife in 2016 was \$1,611, and the median was \$1,683. The average and median costs associated with renting in NWT was lower, at an average of \$1,190 and a median of \$1,298. See **Figure 44**.

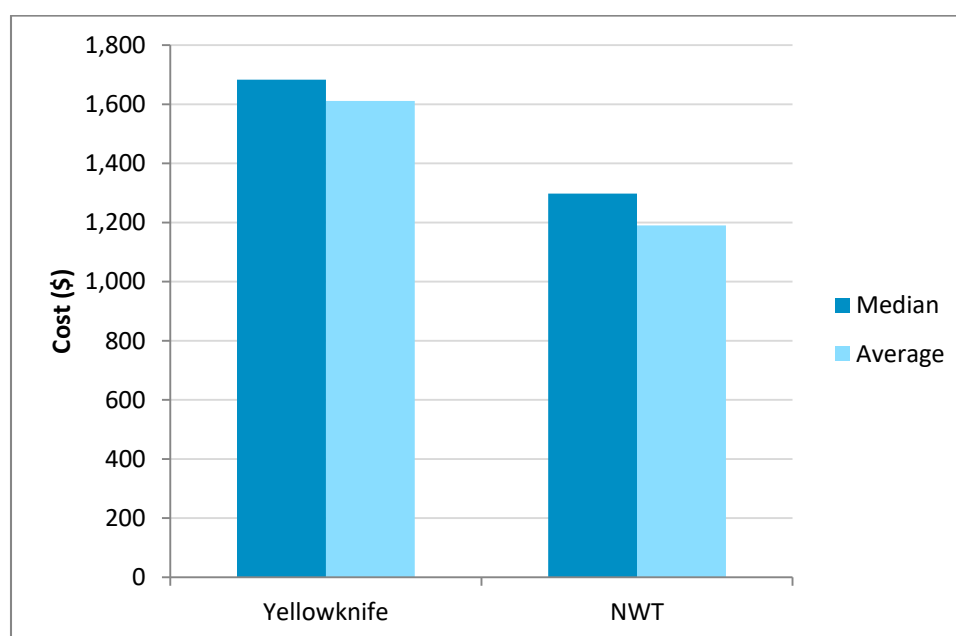


Figure 44: Median and Average Rental Costs, Yellowknife and NWT, 2016

The Canada Mortgage and Housing Corporation (CMHC) also collects data on rented dwellings. The data presented in their 2017 and 2018 Northern Housing Reports are based on the average cost to rent a 2-bedroom apartment. **Figure 45** demonstrates the fluctuating cost of renting in Yellowknife; rent prices were lower in 2016 due to weaker economic conditions and the increase of condominium availability, which provide additional housing options and resulted in weaker demand for rental units (CMHC 2017

and 2018). More recently some apartment units were lost in fires, which has resulted in a decline in availability and an expected increase in demand and monthly rental prices.

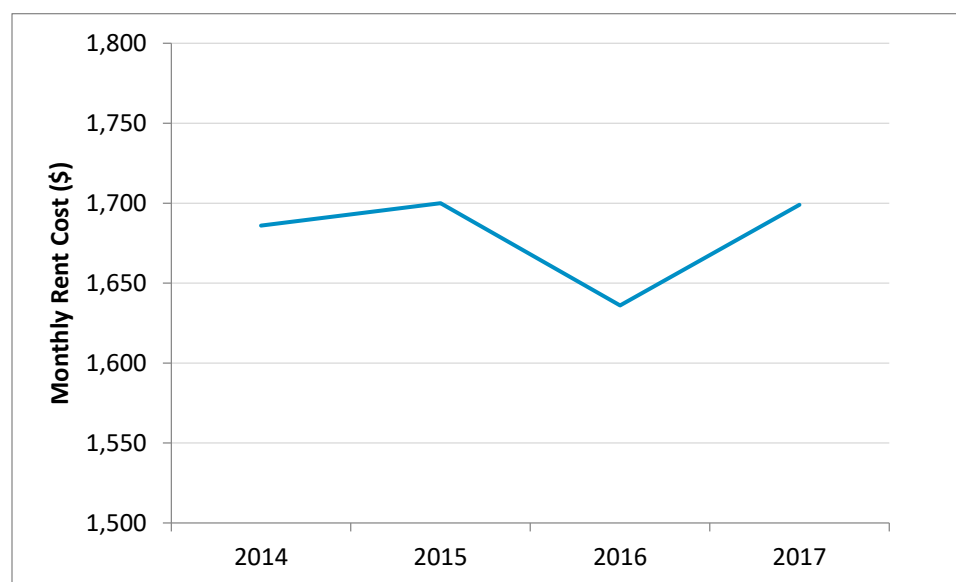


Figure 45: Average Rental Cost, Yellowknife and 2014-2017

4.8.3.2

Ownership Costs

The 2016 Census reported that the average monthly cost for an owned dwelling in Yellowknife was \$2,283, and the median was \$2,309. Average and median costs associated with owning in NWT were lower at \$1,739 and \$1,581, respectively.

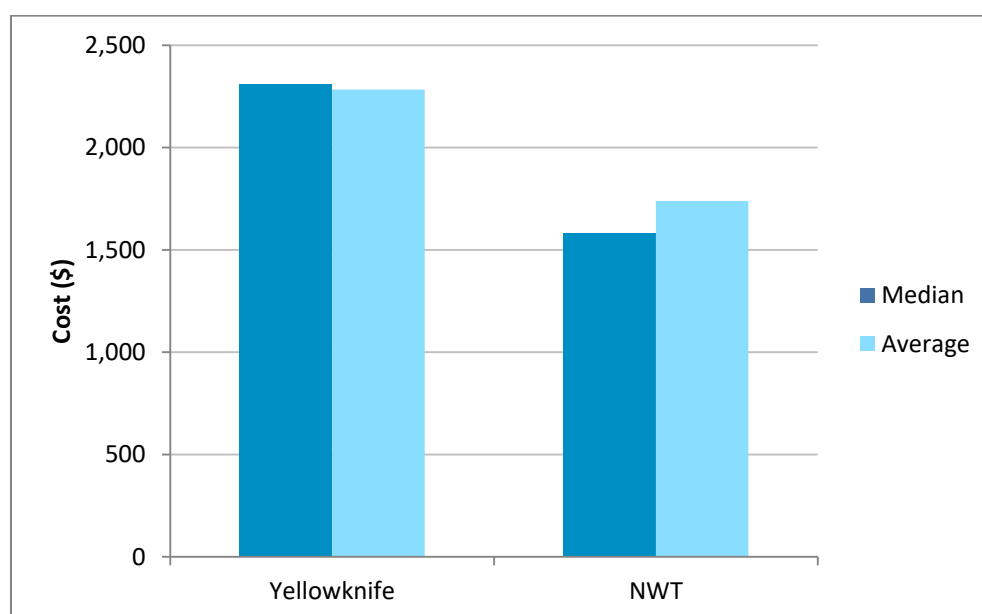


Figure 46: Median and Average Costs of Owned Dwellings, Yellowknife and NWT, 2016

4.8.4 Apartment Vacancies

The vacancy rate of apartment rentals helps to gauge the demand in housing and is useful for identifying unmet needs. **Figure 47** illustrates the apartment rental vacancy rates in Yellowknife between 2014 and 2018 as reported by the CMHC. Key findings include:

- In 2018, Yellowknife had a vacancy rate of 4.9%, up 1.4% from 2017 (3.5%) however down from 4.2% in 2014, reflecting continued variability in demand due to decreases in mining production, and increase in out-migration as well as previously strong condo market growth, which provided prospective buyers with greater options for housing. 2017 saw a 37% increase in mine production from the previous year due to operations at the Gahcho Kué diamond mine near the City (CMHC, 2018), which may have led to the decrease in vacancy for that year; and
- Due to weaker employment conditions in the NWT, and noted out-migration, the vacancy rate in Yellowknife did increase in 2018; however, forecast migration to the City is expected to continue to impact housing demand, and with declines in housing construction may lead to decreasing vacancy (CMHC, 2018).

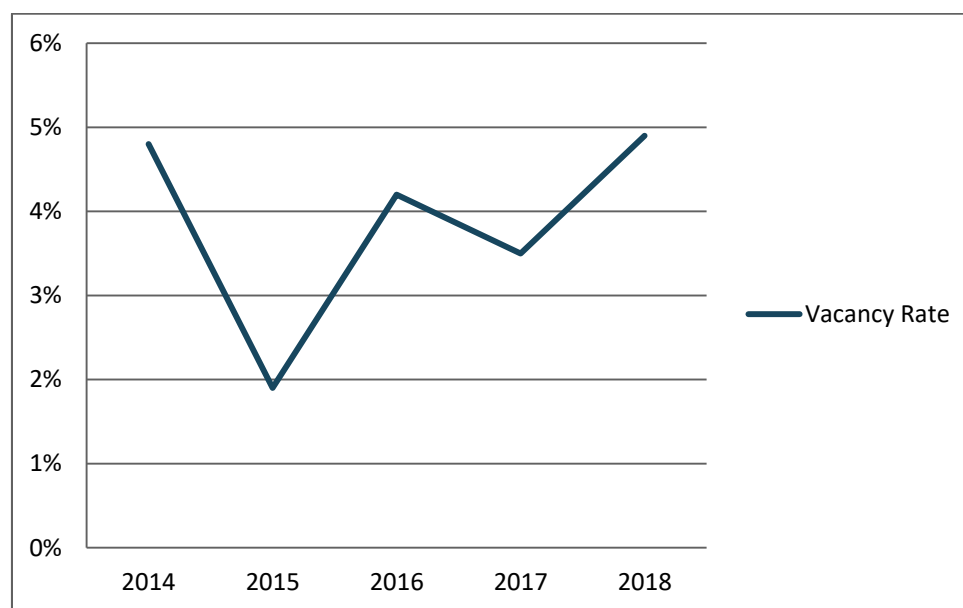


Figure 47: Apartment Vacancy Rate, Yellowknife, 2014-2018

- The recent decline in demand for apartments has not affected rental costs, as these have continued to rise year over year; the average rental rates are up 2.0% in 2018, and average \$1,614 for all housing types (CMHC, 2017 and 2018).
- The vacancy rate is expected to stay relatively stable into 2019, as some additional condominium developments and other housing initiatives become available.

4.8.5 Housing Types

Statistics Canada collects information on household types, which is reported as the “structural type of dwelling” and includes a variety of residential dwelling formats. **Figure 48** illustrates the comparison of housing types between Yellowknife and the NWT for 2016. Key findings include:

- Single-detached homes are the predominant housing type in both Yellowknife and NWT, making up 45% of dwellings in the City, and 69% in the rest of the Territory;
- 75% of apartments in the NWT are located in Yellowknife; 25% are located elsewhere in the NWT; and
- Semi-detached houses are more common outside the City, making up only 2% of Yellowknife’s housing stock, and 11% of housing outside of the City.

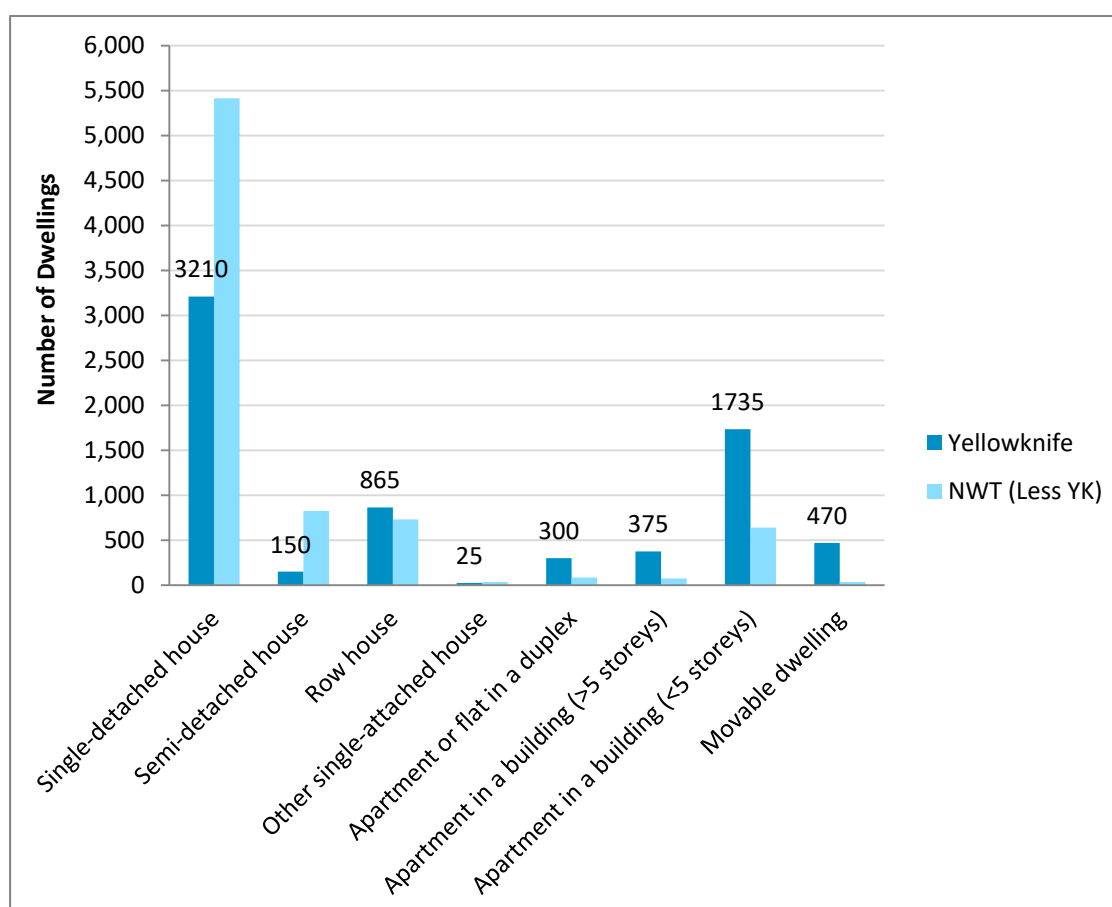


Figure 48: Private Dwelling by Type, Yellowknife and NWT, 2016

4.8.6 Housing Values

The Census collects the *owner estimated* value of private dwellings, which exclude farm dwellings and reserve dwellings. The average and median values of private dwellings, as reported in the Census are demonstrated in **Figure 49**. Key observations include:

- In 2016, dwellings in Yellowknife were reported to have an average value of \$453,608 and a median value of \$420,847, which is higher than the NWT average value of \$346,427 and median value \$321,099; and
- Owner estimated housing values have steadily increased since 2006, where the average was \$302,750 in Yellowknife and \$226,909 in the NWT. Note that Statistics Canada did not release the median value of dwellings in 2006.

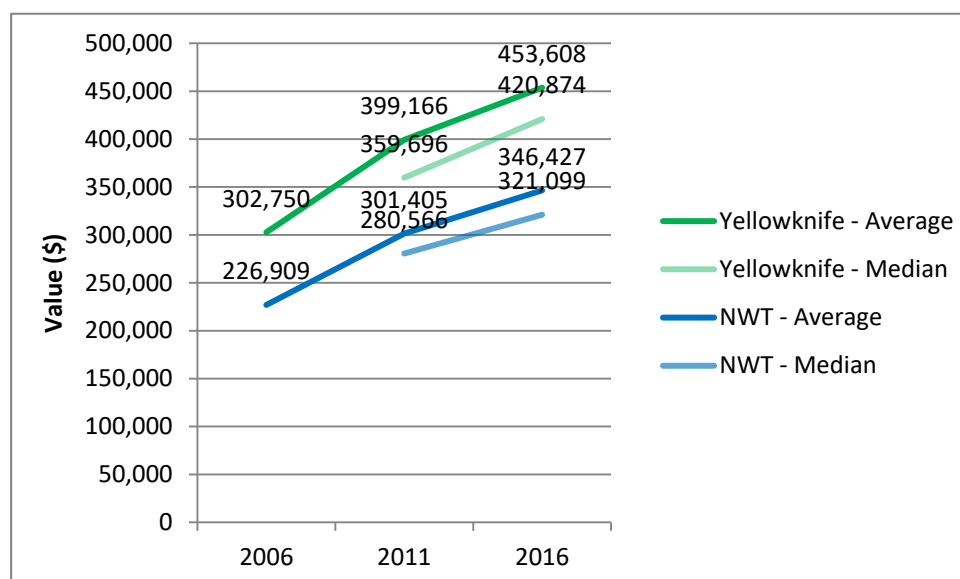


Figure 49: Value of Private Dwellings (Owner Estimated), Yellowknife and NWT, 2006-2016

For more information on the value of housing in Yellowknife, see **section 4.8.8** Housing Sales.

4.8.7 Housing Starts

Housing starts refers to an economic indicator that reflects the number of privately owned new housing units on which construction has been started in a given period. This data is divided into three housing types: single detached houses, townhouses or small condos, and apartment buildings with five or more units. **Figure 50** displays the total number of housing starts in Yellowknife for 2014-2017 with forecasting for 2018, **Figure 51** displays the number of housing starts divided by type. Key findings include:

- The City's release of building lots resulted in strong new home construction activity in 2016, primarily consisting of single-detached and multi-unit homes (CMHC, 2017). 2017 saw a significant decline in new construction in the City with a 49% decline in new units in 2017. Most of the decline in the new housing starts was felt in the single-detached market, with a decline from 59 starts in 2016 to 19 starts in 2017, due to a lack of available land. Multi-units also saw a decline from 67 starts to 46 between 2016 and 2017 (CMHC, 2018).

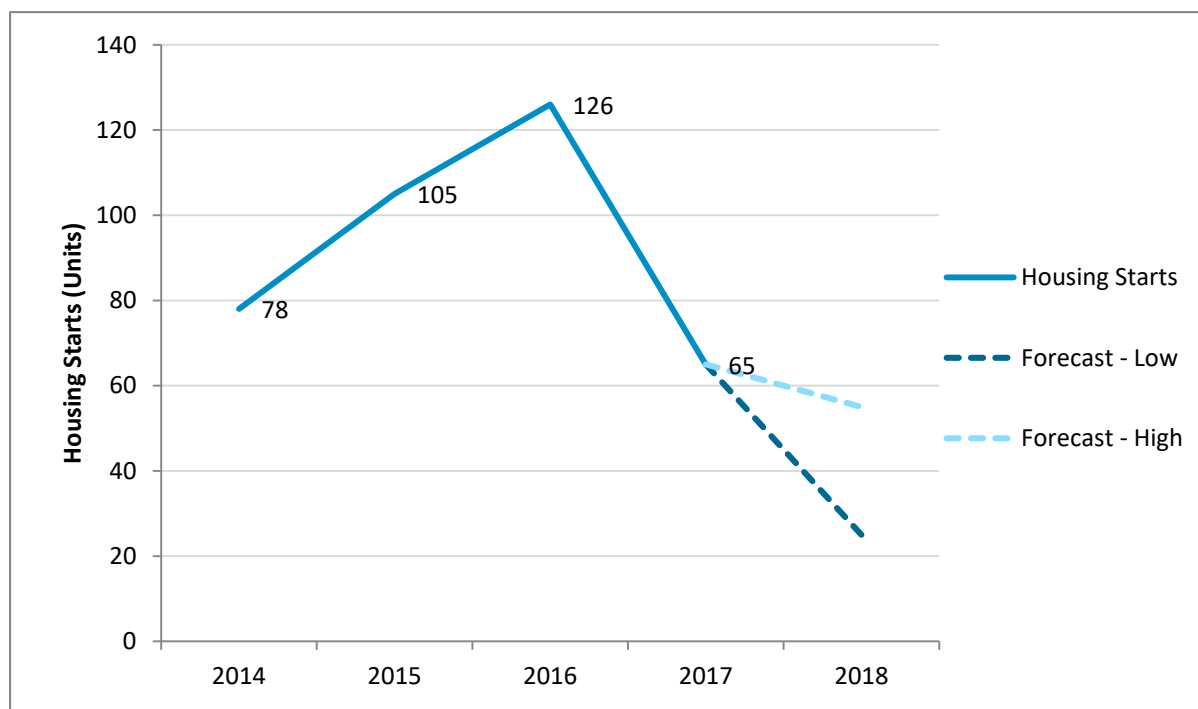


Figure 50: Housing Starts, Yellowknife, 2014-2017, and 2018 Forecast

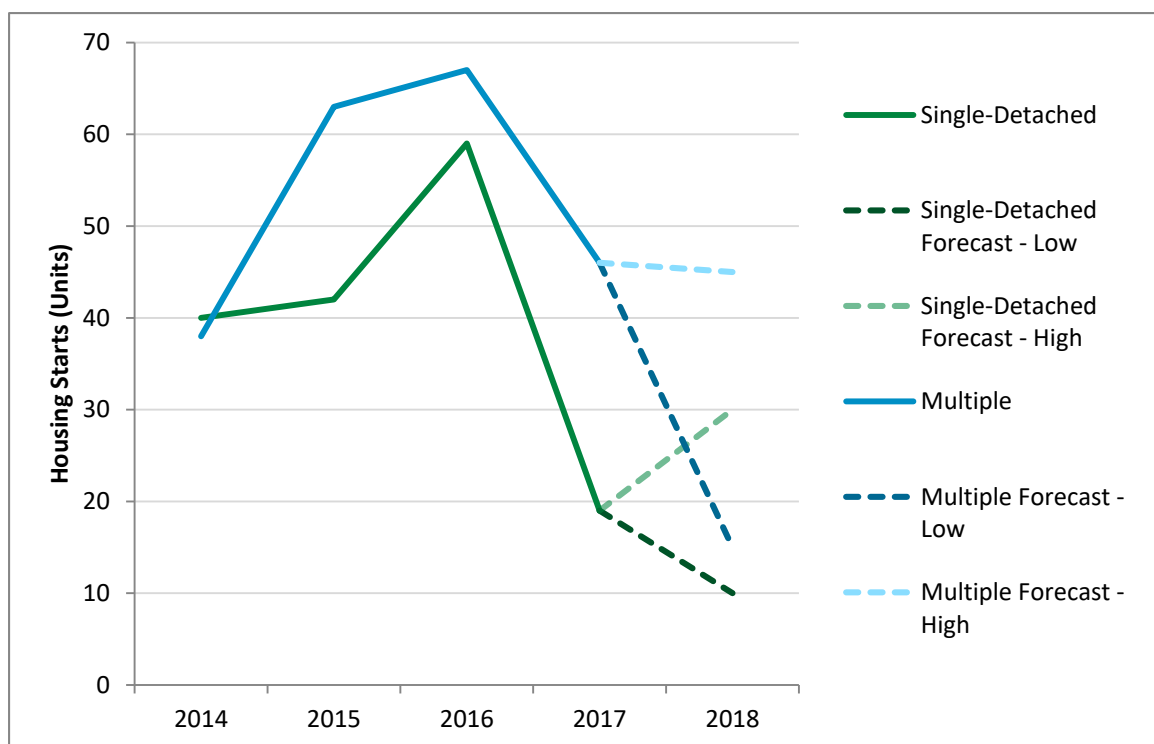


Figure 51: Housing Starts by Type, Yellowknife, 2014-2017 and 2018 Forecasting

4.8.8 Housing Sales

The sale of existing homes is often used to gauge the demand in the housing market and can indicate economic change. **Figure 53** illustrates the sale prices for housing and **Figure 52** shows the number of residential real estate transactions in Yellowknife between 2014 and 2018, as reported in the 2017 and 2018 CMHC Northern Housing Reports. Further confirmation is provided through real estate industry market analysis. Key observations include:

- Condo units and mobile home units have become more popular, which had resulted in a decline in the average sale price of residential units in Yellowknife up to 2016, although the number of sales increased in the same year;
- In 2017, average MLS sale prices increased (3.5%), \$408,290 up from \$395,500 in 2016, with the number of property transactions declining (-1%). This same trend continued in 2018, as the average MLS sale price increased (+5.3% to \$440,068), while the number of properties sold decreased further (-11.4%); and
- It is important to note that an increase in the use of non-traditional real estate listings, has led to changes within the real estate industry and tracking of MLS transactions may not provide complete market analysis. CMHC market forecasting also shows a declining number of residential transactions, since 2016 with an increase in average sale price due to an increase in high end home sales and lower sales in the modular and condominium markets.

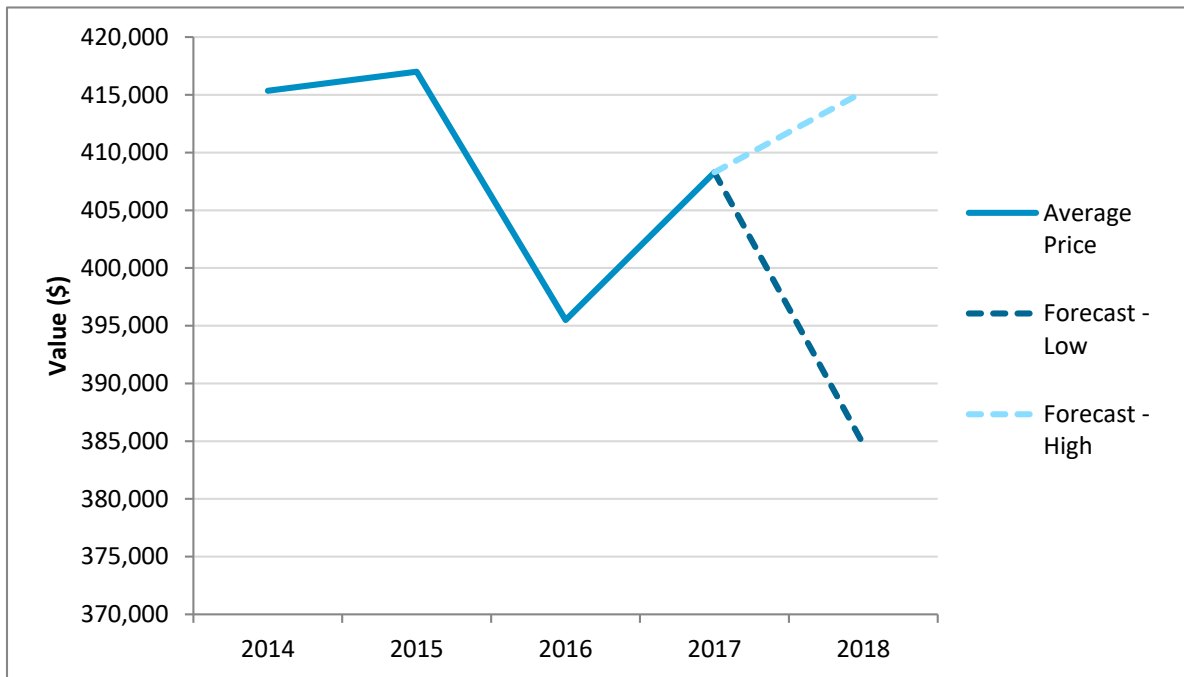


Figure 53: Average Sale Prices of Houses, Yellowknife, 2014-2017, and 2018 Forecast

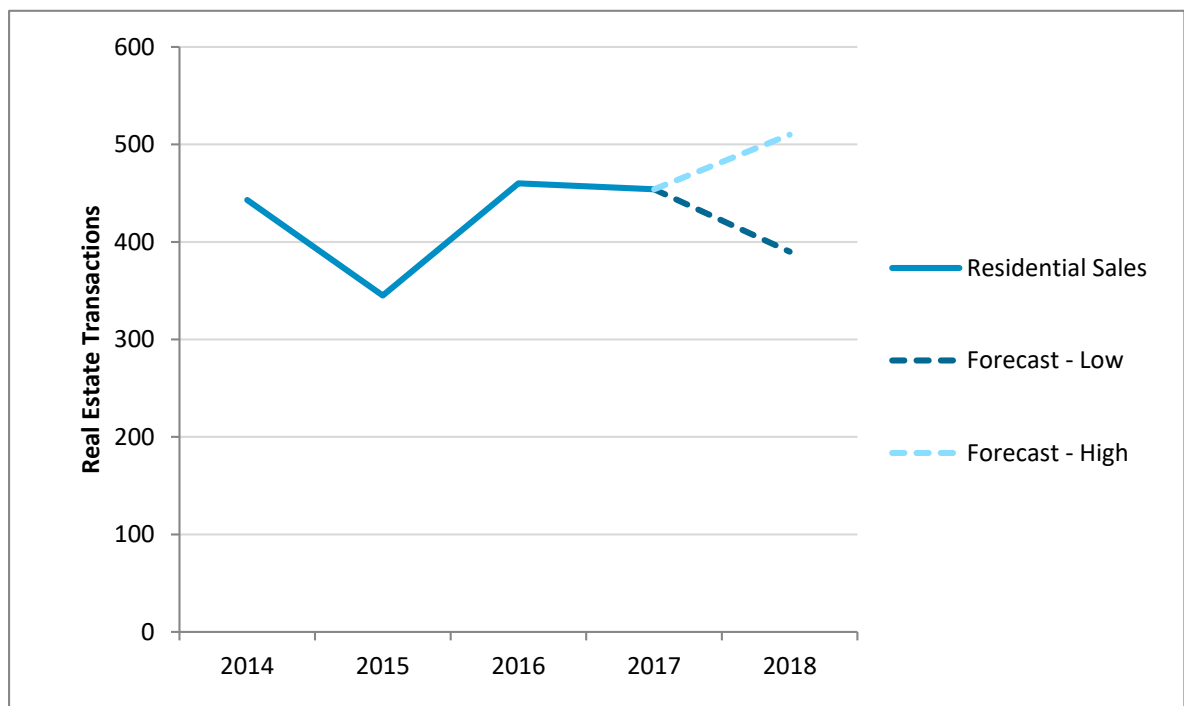


Figure 52: Residential Real Estate Transactions, Yellowknife, 2014-2017, and 2018 Forecast

4.8.9 Construction Activity and Building Permits

By looking at the value of approved building and development permits in the City, we are able to examine the level of investment into new construction and renovation in Yellowknife. Key observations include:

- **Figure 54** demonstrates the total value of construction between 2009 and 2017. From this chart it appears as though the value remains stable over time, with exception to the years 2013 and 2016 where significant increases were noted; and
- **Figure 55** further categorizes the construction value based on residential and non-residential development, demonstrating that there is more variability year-to-year in both categories. The data demonstrates a generally steady increase in the overall value of residential construction, with reductions in the years 2013/2014 and 2017. Non-residential development has experienced a more drastic ebb and flow, with major spikes in 2013 and 2016.

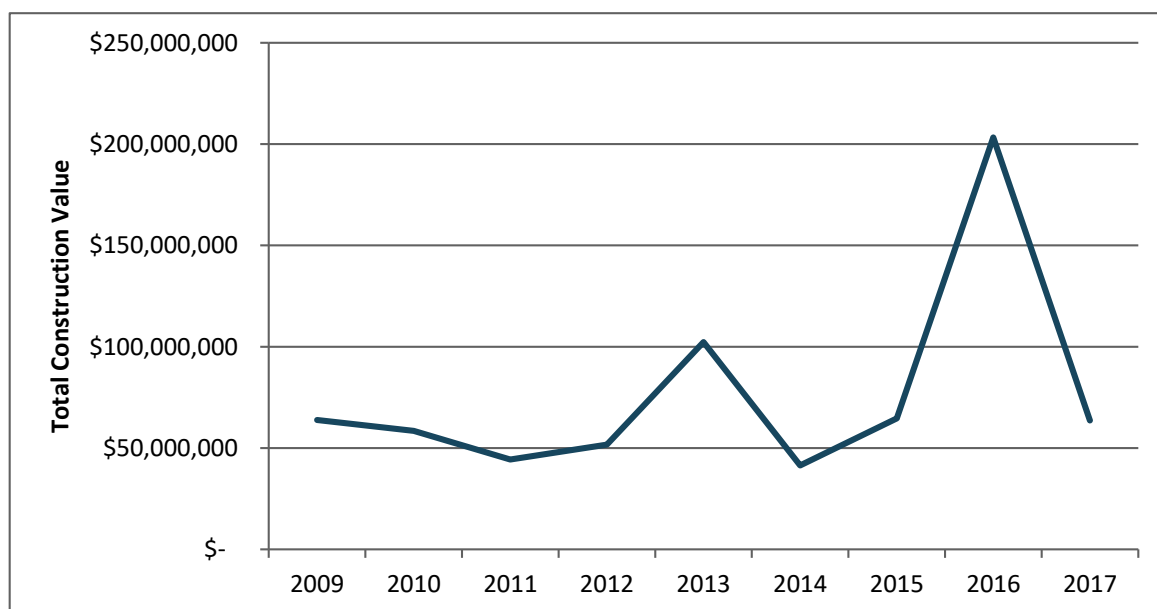


Figure 54: Total Construction Value by Year 2009-2017

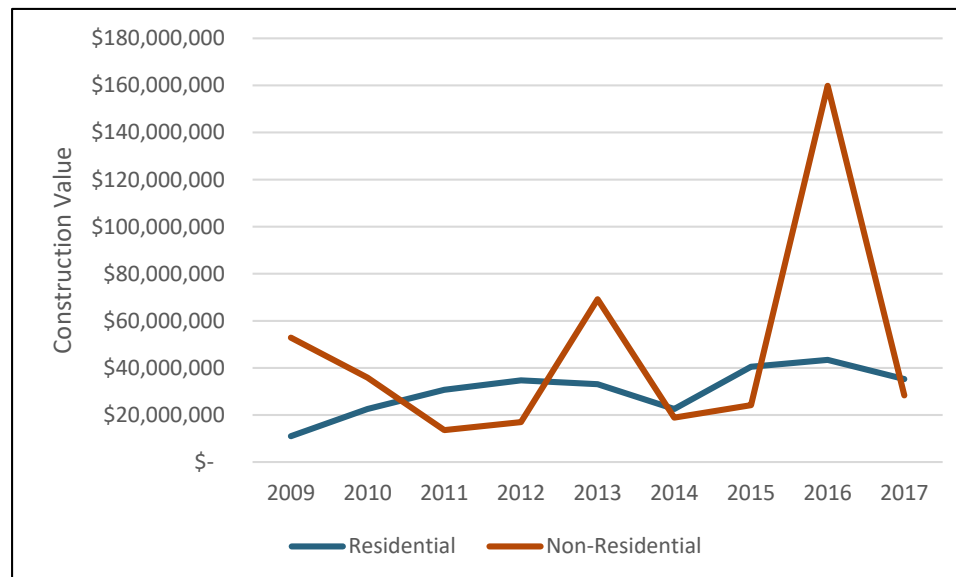


Figure 55: Construction Value by Residential and Non-Residential Development, 2009-2017

- **Figure 56** demonstrates that the number of building permits issued by the City each year decreased between 2009 and 2013, from 763 permits issued down to 423. The number then increased until 2015, when 499 building permits were issued; the number of building permits issued has since continued to decline.
- **Figure 57** demonstrates the dissimilar trends for the number of building permits issued for residential and non-residential development. Residential building permits have declined in number since their peak at 536 permits in 2010. A short increase was felt between 2013 and 2015.
- Non-residential building permits decreased in number from 2009 until 2014, when there was a small increase of 7 permits, then continued to decrease until 2016 where the number of permits has increased from 79 in 2015 to 131 in 2017.
- The average value of building permits between 2009 and 2017 is demonstrated in **Figure 58**. The average value of residential building permits has increased from \$22,227 in 2009 to \$124,146 in 2017. The average value of non-residential building permits has increased from \$197,332 in 2009 to 216,261 in 2017, but has displayed significant variation over time, reaching a low of \$115,353 in 2011 and a high of \$1,551,847 in 2016.

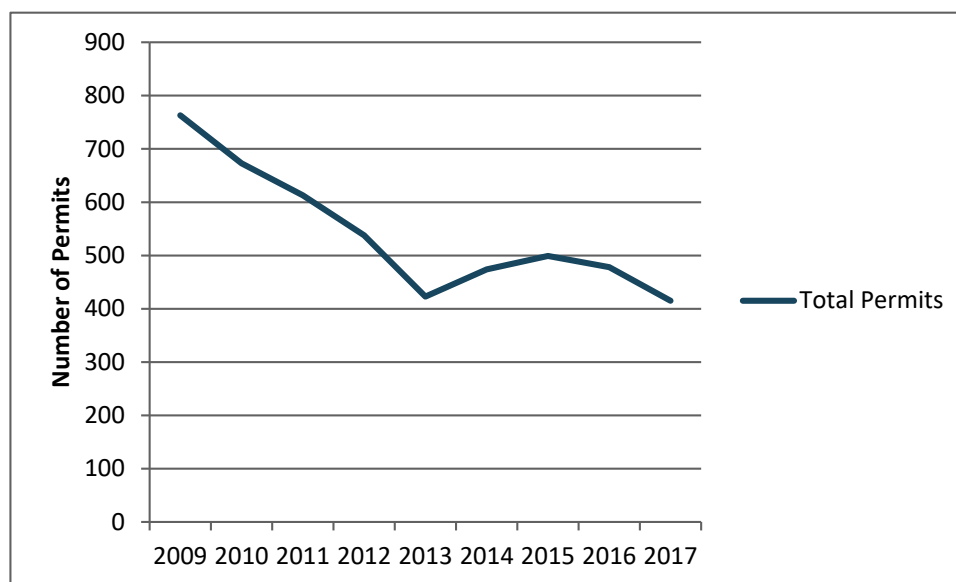


Figure 56: Total Number of Building Permits by Year, 2009-2017

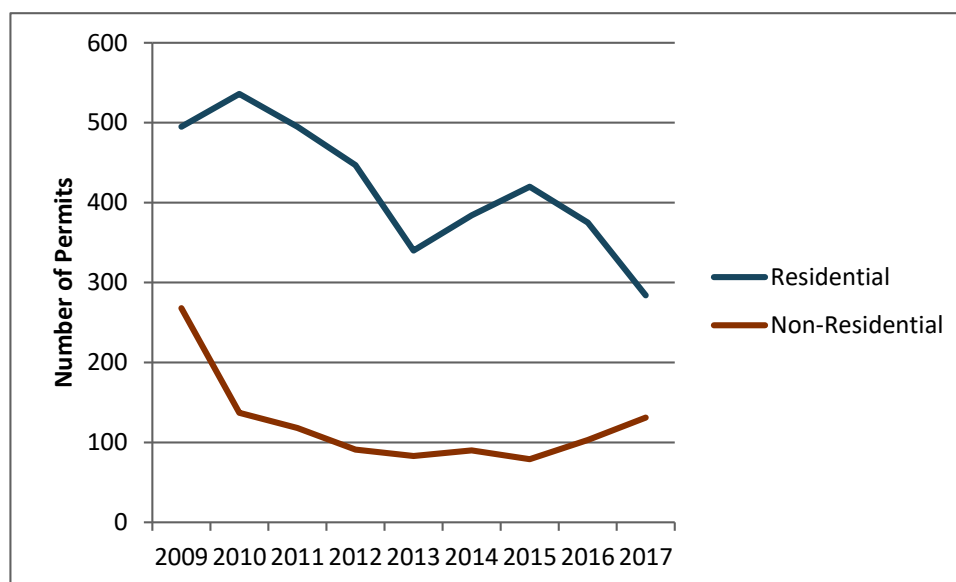


Figure 57: Building Permits by Residential and Non-Residential Development, 2009-2017

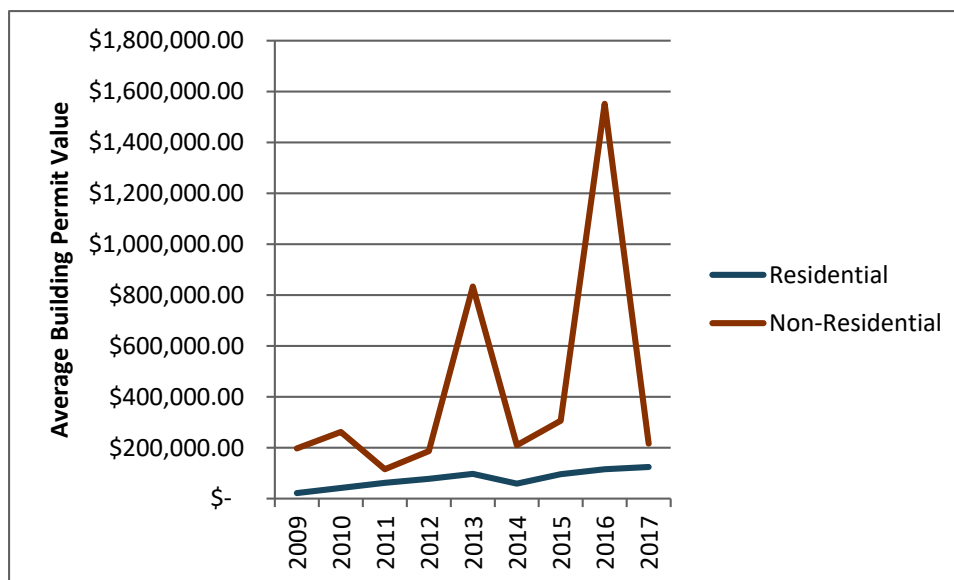


Figure 58: Average Value of Building Permits by Residential and Non-Residential, 2009-2017

The City also retains data in regards to development permits; however, detailed data has only been collected since 2014 with the transition to the online CityView application. Key observations include:

- **Figure 59** demonstrates that the number of development permits issued each year increased between 2013 and 2015, before declining until 2017, which is in line with the building permit trends (**Figure 56**). Notably, by the third quarter of 2018 (last available data), 194 development permits were issued, which is a significant increase from the 123 development permits issued in 2017; and
- The increase in development permits issued in 2015 was due to an increase of permits issued for new residential properties (**Figure 6060**). In the same time period, the number of development permits issued for other purposes declined.

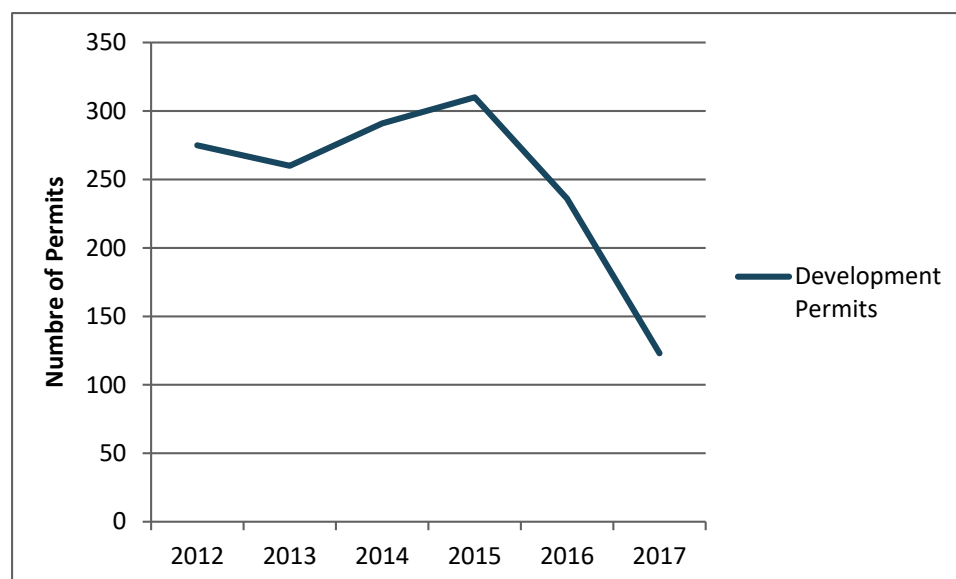


Figure 59: Total Number of Development Permits Issued by Year, 2012 - 2017

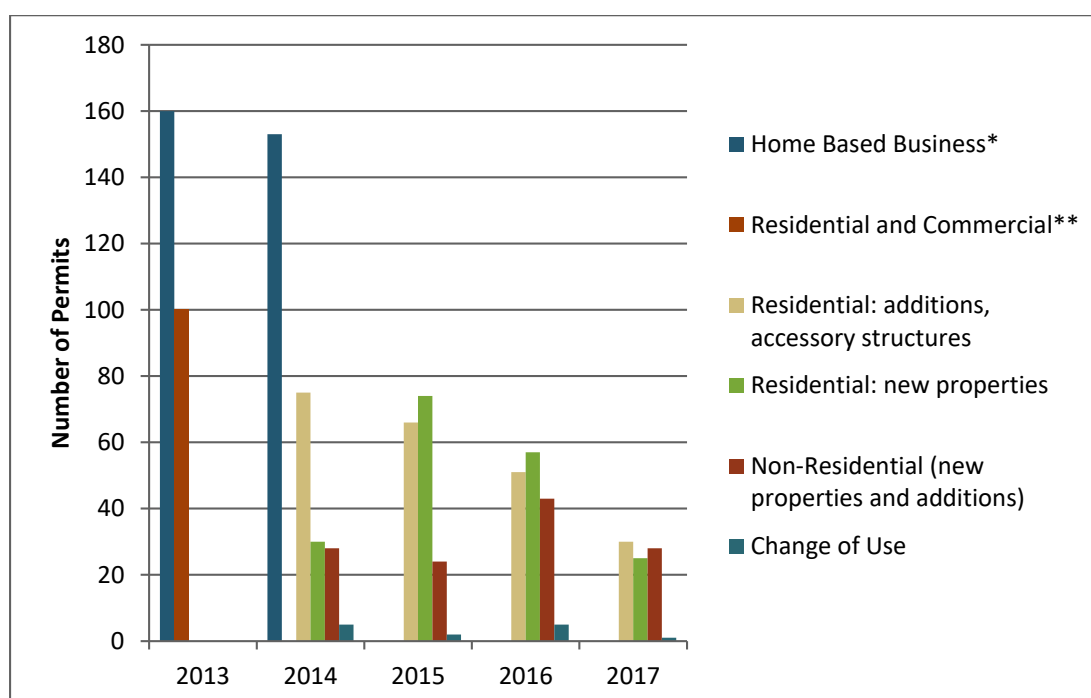


Figure 60: Development Permit by Type, 2013 - 2017

* In 2017 the Homebased Business Development Permit process was amended to exclude home office uses from the Development Permit process.

** Available data for 2013 had two categorizations: Home Based Business, and Residential and Commercial. Additional note: No categories were available for 2012 data, as such it is not included in the above graphic.

4.9 Municipal Tax Base and Fiscal Outlook

In 2017 76% of the City's operating revenue was raised through property taxation. Property taxation also raises a significant portion of the operating revenue for the Yellowknife School Districts. Municipal property taxes are used to provide a variety of services and programs, including: Community services; Economic development; Grants to community groups; Public works and transportation; Public safety; Planning and development; and, Support services. The allocation of each budgeted tax dollar in 2017 is illustrated in **Figure 61**.

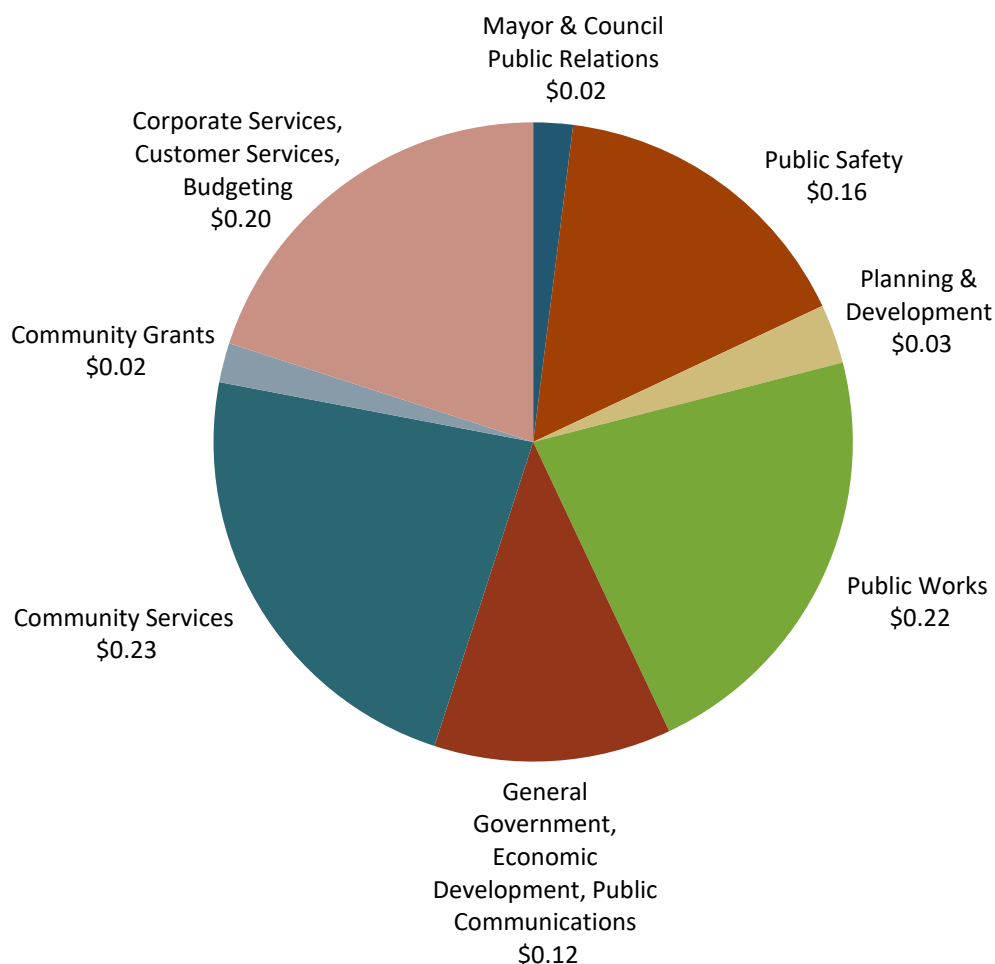


Figure 61: Allocation of Budgeted Tax, Yellowknife, 2017

Property taxes are determined by the property assessments and the municipal and education mill rates. The municipal mill rate is determined by dividing the total property tax revenue required to meet the City's annual operating budget by the City's total property assessment. The education mill rate is determined similarly and school taxes are collected by the City on behalf of the school Boards; however,

it does not control the school taxes. The assessed value of properties are valued as a “base year”, which for Yellowknife is 2012.

Land Assessment Values reflect 100% of market values in Yellowknife for the 2012 base year. These values are determined by analyzing the average selling price of similar parcels of land in an area for the base year. Factors such as lot size, location and zoning are considered in the assessment value.

Building Assessment Values reflect 100% of typical depreciated replacement costs for the 2012 base year. These values are determined by applying the guidelines for a building assessment based on northern costs. Factors affecting building assessment values include size, type of structure, quality of materials and depreciation. Building assessment values include fixed structures (residences, garages, etc.), but not items such as home furnishings, fences, driveways or landscaping.

- **Figure 62** illustrates the assessed property values by their total land value, total improvement value and combined total from 2012 to 2018. Assessed values have generally increased at a steady rate this time period, with exception to a significant spike in 2014. From 2013 to 2014 the total assessed land value increased by over 57% and total improvements increased by 38%, leading to a combined increase in value of nearly 44%.

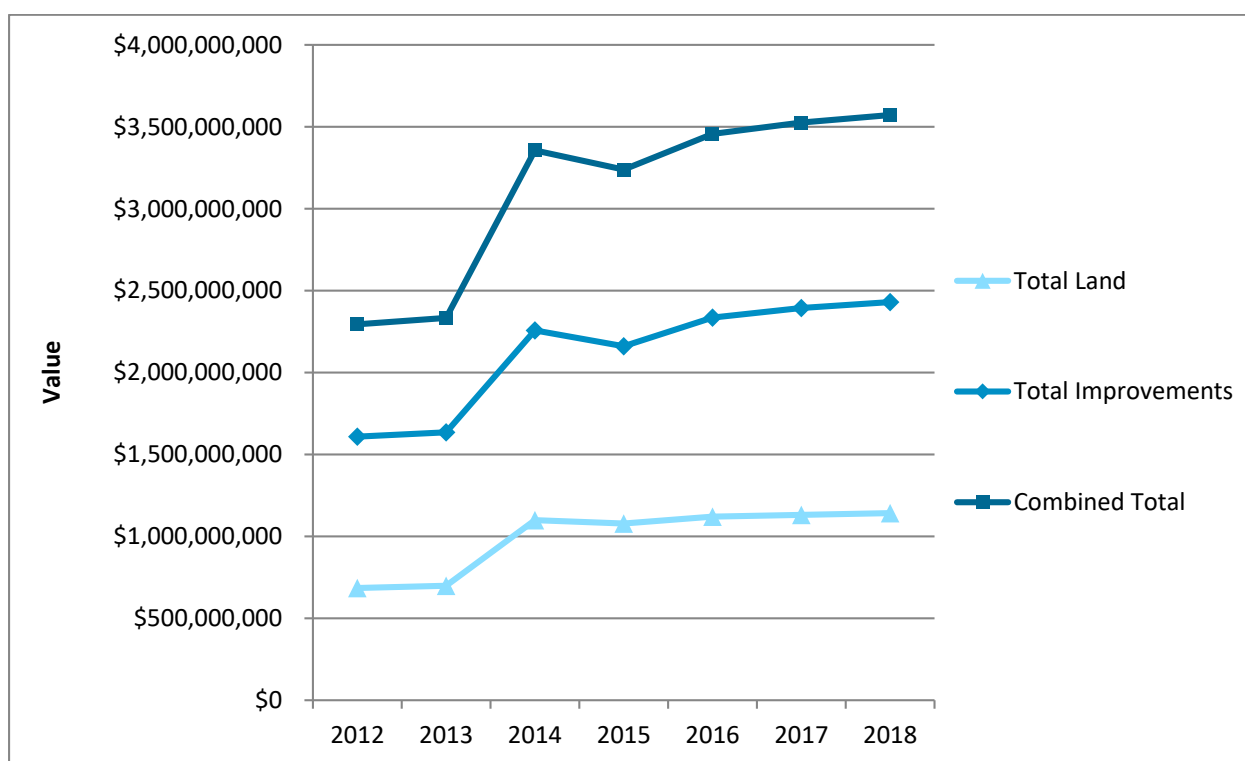


Figure 62: Assessed Values by Total Land, Total Improvements and Combined Total, Yellowknife, 2012-2018

- **Figure 63** indicates that the increase in assessed value from 2013 to 2014 was attributed primarily to an increase in the total assessed value of residential properties. For property assessment taxation purposes, residential properties include single unit dwellings, condominiums, mobile units, duplexes and triplexes. The classification also includes vacant residential property and undeveloped land near a residential parcel. The total assessed value of residential properties in 2013 was \$894,462,220, increasing by over 55% to \$1,391,722,190 in 2014. The overall increase in total assessed value of residential properties from 2012 to 2018 was 79.3%, increasing from \$865,852,960 to \$1,552,851,310.
- The total assessed value of multi-residential properties increased by 40.5% in the period between 2012 and 2018, from \$272,669,330 to \$384,396,630. Multi residential properties include those that contain four or more dwelling units on a single parcel.
- The total assessed value of commercial or industrial properties increased by 36.9% in the period between 2012 and 2018, from \$590,224,870 to \$808,193,020. This class contains all parcels which are predominantly used for commercial and industrial purposes, such as the production, development, manufacture or provision of goods or services; this class also includes vacant land zoned for non-residential purposes, works and transmission lines.
- The total assessed value for mining and quarrying lands increased by 61.7% from 2012 to 2018, valued at \$10,390,160 in 2018, up from \$6,426,750 in 2012. This class is made up of parcels which are predominantly used for the extraction of sand, gravel, and ore; and facilities directly related to milling, smelting, refining, sorting and grading of precious metals, gems and minerals. See **Figure 64** for detail.

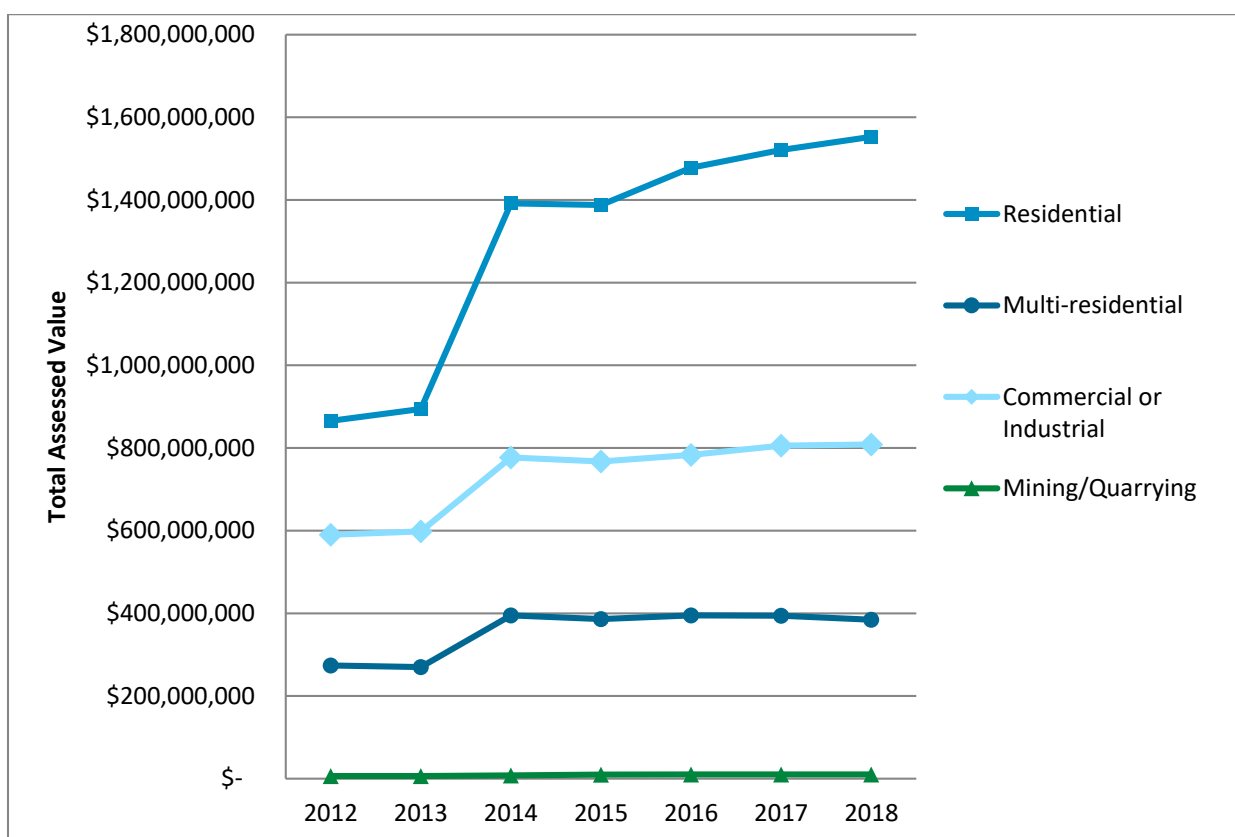


Figure 63: Total Assessed Value by Tax Class, Yellowknife, 2012 - 2018

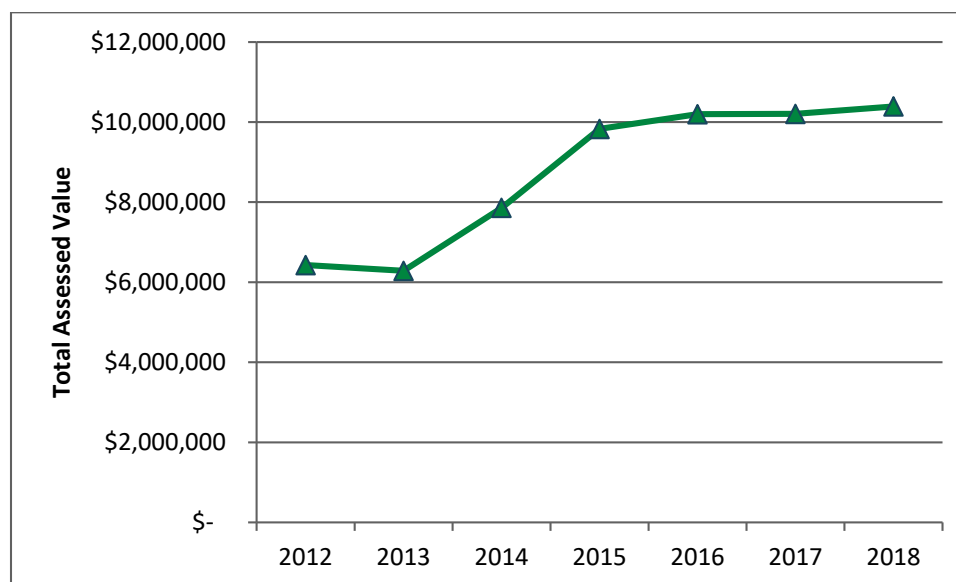


Figure 64: Total Assessed Value, Mining/Quarrying, Yellowknife, 2012 - 2018

4.9.1 Fiscal Outlook

While assessed values have continued to rise in the past 6 years of data, it is important to recognize that major declines were and will continue to be experienced due to the declining assessed values of the Giant Mine and Con Mine properties. Reaching peak levies of \$1,042,143 in 1991, the Giant Mine property is estimated for its post-closure and monitoring stage, to only generate \$8,300 in municipal taxes and \$4,000 in school district taxes. As there was no financial savings in municipal service delivery to this site, the City assumed a financial burden as part of this closure work. This major decline in tax revenue is likely to occur for the Con Mine site as well, and must be addressed through increasing mill rates amongst the remaining tax base. As addressing this shortfall through increasing mill rates amongst the existing tax base is likely to be insufficient and burdensome, additional development lands should be transferred to the City from the Government of the Northwest Territories. Such a land transfer will allow for City Administration to make up for these recent tax burdens through the development of land, land sales and increasing economic activity and assessed values.

The exclusion of Akaitcho lands, and potential airport industrial lands will also undermine the tax base of the City, as part of future industrial and commercial relocation and expansion occurs outside of the municipal tax area. While the current council has sought to reduce spending and increase reserves, future major projects relating to the submarine water intake pipe, and aquatic centre may place burdens upon the financial resources of the City, which may not be affordable due to declining tax assessments.

4.10 Climate Change

As considered in a variety of sections throughout this report, real and occurring impacts of climate change, including human-induced high carbon emissions are leading to changes in the world and particularly the northern regions within which Yellowknife is situated.

The Prairie Climate Centre, Climate Change Report for the City summarizes temperature and precipitation data from 1976 to 2005, and projects outward under three scenarios for 2051 to 2080. The results of these projections are included within the table below.

Table 2: Prairie Climate Centre - Climate Change Estimates for Yellowknife, 2051-2080

Change	1976-2005	2051-2080 High-Carbon Climate Change Projections		
	Mean	Low	Mean	High
Typical Hottest Temperature	28.7	29.0	32.2	36.4
Typical Coldest Temperature	-43.6	-45.8	-37.3	-33.5
Number of -30°C Days/Year	53	3	16	34
Number of below-zero days/year	227	168	192	216
Number of +25°C Days/Year	7	9	27	54

Change	1976-2005 Mean	2051-2080 High-Carbon Climate Change Projections		
		Low	Mean	High
Annual Precipitation (mm)	292	265	344	436
Frost-free season (days)	111	121	144	166

The projection data forecasts a wetter average climate, with warmer winters and fewer cold days. The high carbon climate scenario appears as illustrated in **Figure 65**. Dashed blue bars (precipitation) and the dashed yellow line (temperature) represent averages experienced from 1976-2005, while solid bars and lines represent the high projections for climate that Yellowknife may experience. A projected warmer and wetter future climate will require change within the City.

The City of Yellowknife, through its community energy planning initiatives, recognizes that it must act on Climate Change, seeking to reduce greenhouse gas emissions community wide by 30% in 2025. The City will act in its own operations, and attempt to influencing residents to reduce their emissions and reduce their reliance on non-renewable fuel sources. A significant proportion of these emissions relate to home heating, particularly due to the northern climate. The Governance and Priorities Committee in July 2019, recommended Council adopt By-law 5004, a by-law to amend Building By-law No. 4469, as amended, for the purpose of implementing energy efficient building standards that exceed the National Building Code.

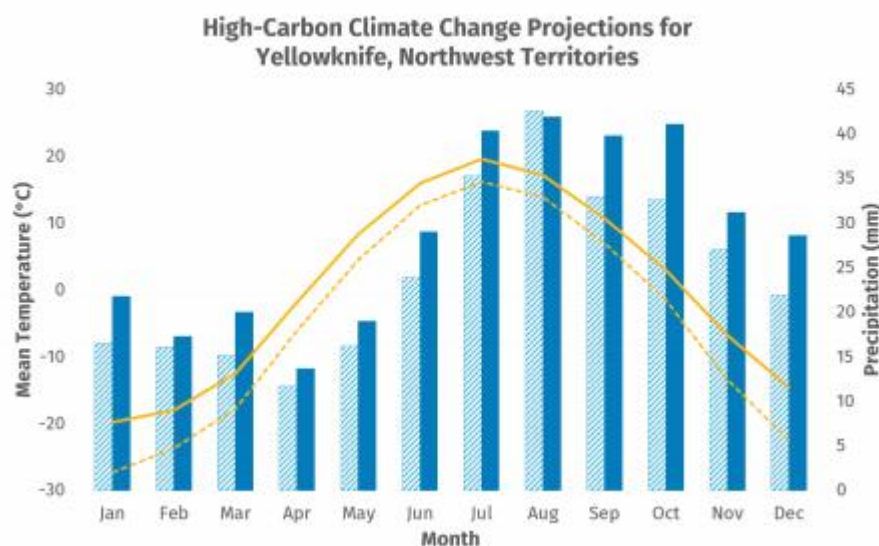


Figure 65: High-carbon climate change projections, Prairie Climate Centre Report, 2018

5.0 Physical Profile

5.1 Land Uses within Yellowknife

The purpose of this section is to show the progression of land uses within the City. Key land use changes in recent years include in-fill, the transition of Kam Lake, development of the Engle Business District, and the development of Grace Lake. Both historically and currently, the development of the City is constrained by its topography – with rock outcroppings, lakes, muskeg, permafrost and now the presence of inactive mine sites. Additionally, the City was founded on lands known and used by Akaitcho Dene First Nation people, and some lands are now subject to the Akaitcho Interim Land Withdrawal (see **section 5.13**).

A population boom caused by a gold rush resulted in the early settlement area being incorporated as a village in 1938. Early development was focused on what is now known as Old Town and Latham Island. Development sat amongst the rocks and niches and reflected the City's origin as a mining town, with a bush plane supply post and the diversity of land uses reflective of the needs of residents. As the original town site, Old Town retains a mix of residential and commercial land uses.

When the population grew, development moved uphill to “New Town”, which now functions as the City's downtown area. This area includes the central business district and contains a mix of commercial, institutional and residential uses. Large mining operations located North and South of the City posed development constraints that required residential development to move westward, resulting first in the development of the Frame Lake subdivision, which is a typical subdivision development with curvilinear street design, large lots, and the separation of non-residential land uses.

An airstrip was constructed in the mid-1940s, and the road connecting it to the settlement, now known as the Old Airport Road corridor, currently serves as the location for the City's big box stores (single-storey, large floor plate retail). South of the primary settlement area is the Kam Lake Industrial area, which contains a mix of industrial, commercial and some residential units. Residential land uses border the industrial area from both the north (Frame Lake) and south (Grace Lake).

Through the 1980s and 1990s, Range Lake and Frame Lake South, located south and west of Old Airport Road, were developed. The Range Lake area contains a mix of residential dwelling types and smaller lot sizes than the Frame Lake area. Schools, trails and parks are located in all housing areas. The Franklin Avenue corridor has functioned as a location for significant public facility development such as recreational facilities and senior's housing. As the city continued to grow, development was directed towards Niven Lake due to constraints of topography, airports, and mine leases.

Over time, the way people live changes and that is reflected in the changing way land is used; as evidenced by the boom in condominium development in the City in the past 5 years. This is also

reflected in the interest in other small, affordable housing options, which has grown in Yellowknife and throughout North America of late. Small homes may serve to facilitate infill and reduce greenfield development. Although the City does not prescribe minimum dwelling sizes, which is a common restraint to the development of tiny homes, all lots zoned for single detached and duplex dwellings have a minimum lot size; this may make the construction of smaller dwellings financially infeasible. In August 2017, the Municipal Services Committee recommended that Council direct Administration to incorporate considerations for smaller housing forms as part of the Plan review.

There has also been a notably increasing interest in northern, primarily urban, agriculture. Presently, agricultural uses are not permitted anywhere in the General Plan. Community gardens were added as a permitted use in the Parks and Recreation zone in 2012, and greenhouses are permitted in the Business Industrial zone; however, there are no provisions for other urban agricultural uses.

Additionally, the changing economic climate has resulted in the closure of mines located within and near the City. Mines that are no longer operational pose development constraints, but also present opportunities for future development through remediation. For example, the Giant Mine Remediation Project, which is currently underway, is expected to take up to 10 years. The remediation is intended to leave the site that is usable for future uses, as determined by the community through consultation. The remediation project will also result in more workers in Yellowknife, creating a greater demand for services.

As the City has transitioned away from its foundation as a resource-based economy, there has been an increasing focus on tourism. Aviation traffic in Yellowknife has doubled since the late 1980's, largely due to increased tourism and business travel, and is expected to continue to grow (*Yellowknife Airport Five-Year Business Plan 2018-2019 to 2022-2023*). The improved access and affordability of northern tourism has helped to shape modern Yellowknife, with the increase of tourism-focused businesses. This represents an ongoing opportunity for the City to leverage its natural assets and facilitate greater tourism development for the benefit of residents and visitors alike.

In recent years there has also been a significant shift in political and social attitudes towards support for reconciliation with Canada's First Nations. This has also resulted in changes to the structure of the City, due to the interim land withdrawal, and in a greater understanding of the importance of building a stronger relationship with our neighbours.

5.2 Existing Area Development Plans

In the past, area-specific planning review for a variety of land uses (residential, mixed use, industrial, etc.) were referred to as development schemes. These location specific plans considered use and design characteristics for the plan areas, and established policies for such factors. In this way, City planning staff then had control over the development of each area. An image of these Area Development Plans is included in the **Appendix B (Figure 5.2)**.

Capital Area Development Plan: Established through the Capital Area Development Scheme By-law and adopted in 1996, this policy was repealed in June of 2017, and replaced by the current Capital Area Development Plan (By-law No. 4940). **Figure 5.2.0 (Appendix B)** shows the boundary of the Capital Area Development Plan. The intent of the 1996 Development Scheme was retained in the new Plan and integrated with sustainable community growth principles adopted under the Smart Growth Plan. The purpose of the Plan is to provide guidelines for improving public spaces, preserving natural and cultural heritage and managing growth in the Capital Area, which consists of 434 hectares surrounding Frame Lake and Jackfish Lake. The majority of the area is intended for use as natural preservation area, and the Plan includes guiding principles and land use policies to guide development. Several specific areas are identified as Enhancement Sites and Development Areas and include:

- **Gateways:** Bristol Gateway functions as an entrance corridor to the Capital Site and the City, and consists of a commercial area and monument park. The Downtown gateway (Highway No. 4 between Niven Gate and the intersections of 49 Avenue and 48 Street) is intended to be enhanced with considerations for streetscaping and better pedestrian and cyclist connections).
- **Bristol Pit, Frame Lake West Park, and McNiven Beach Playground:** Intended for recreational land uses. Improvements to the Jackfish Lake Look-Out Point are contemplated to increase recreational and tourism opportunities. Improvements to trail connections throughout the area are also described.
- **Somba K'E Civic Plaza:** Improvements are envisioned to enhance year-round amenities and activities and may consider a formal boat launch.
- **Ceremonial Circle:** Design improvements are intended to increase public awareness and aesthetics and increase opportunities for year-round use of the space for cultural activities.

Block 501 Housing Development Scheme: The Block 501 Housing Development Scheme encompasses an area between Kam Lake Road and Kam Lake. The Development Scheme was originally adopted as By-law 4700 in 2012 to enable the development of low and medium density residences. The by-law was amended in 2013 and again in 2014, and to include a section designated as Parks and Recreation and the number of multi-family parcels was reduced from the original 4 parcels to 1 parcel. In June of 2019, an amendment was received to remove all multi-family parcels.

Enterprise Drive Extension Development Scheme: The Development Scheme, passed in 2012, provided an addition to the Kam Lake Industrial Park that extends to the Grace Lake North area, and enabled a range of commercial and light industrial uses and included provisions for accessory residential uses. All lots created through the subdivisions have been sold.

Grace Lake North: In 2012 Council Adopted Grace Lake Development Scheme By-law No. 4676. Land development and land sales for the Grace Lake North residential lots started in 2012. The By-law was amended in April of 2017 to remove a floating boardwalk and pathway from the middle of the subdivision area and include park nodes at the east end.

Grace Lake South: In November of 2015, Council adopted the Grace Lake South Area Development Plan By-law No. 4867 for an area along the southern shore of Grace Lake. As of June 2018, 18 lots developed as part of Phase 1 are available for purchase, 9 have been sold, and 2 are not available. Land uses are limited to detached dwellings and the lands are zoned Waterside Residential, however the residential lots do not have direct lake access. Proposed trails will connect to the existing trail network and a golf course is contemplated for the lands adjacent to the residential lots. The development of Phases 2 and 3 is to be scheduled subject to future development needs.

Hordal Bagon Area: Council adopted By-Law No. 4894 in March 2016 to establish an area development plan for the Hordal Bagon Area, located West of Kam Lake. The area defined in the plan is approximately 2.18 hectares in area and was created to accommodate single unit development, with the possibility of accessory residential uses. 26 lots of varying size have been zoned R5 – Residential – Manufactured Dwelling; as of June 2018, 15 lots have been sold and 11 are available for purchase.

Niven Lake Development Scheme: The Niven Lake subdivision wraps around Niven Lake just north of Downtown. The Niven Lake Development Scheme originally came into effect through By-law No. 4339, in 2004, and was amended five times and repealed in 2007 by By-law No. 4437. The area was developed by the City in several phases as a primarily residential community. The Niven Lake area consists primarily of single-unit dwellings, with some detached, duplex, multi-attached (townhomes) and multi-unit (apartment) dwellings. The Niven Lake Development Scheme was designed to accommodate future transit service, and to link into the city's established trail system. An urban/nature park is planned at the northeast edge of the Development Scheme, as recommended in the City's Integrated Parks, Trails and Recreation Study.

The most recent phase of development in Niven Lake is Phase VII Stage II comprises 3 cul-de-sacs (Findlay Pt., McMahon Crt., and Lyons Pt.) and lots along Moyle Drive. These lots are intended for single-detached homes and duplexes. As of June 2018, 31 lots have been sold and 6 lots remain for sale.

Engle Business District Phase 2 Area Development Plan: Adopted in 2007, the *Yellowknife Airport West Industrial Development Scheme* identified an area for general industrial land uses, which later became known as the Engle Business District. Located southwest of the Airport, with convenient highway access to the Airport and the Kam Lake Industrial Park, the Engle Business District area accommodates general industrial and business industrial uses. Phase 1 saw the development of 36 lots, all of which are sold. In November of 2016, City Council enabled the disposal and lease of two parcels (6.4 hectares total) of industrial lands to be added to the Engle Business District for general and business industrial use, which was known as the *Homes North Engle Business District Area Development Plan*. This development scheme was repealed with the adoption of the *Engle Business District Phase 2 Area Development Plan* in April of 2017, and amended again in February of 2018. Development of Phase 2 began in 2017 on a 65 hectare portion of the Development Area. Scheduling for further construction phases will be subject to future land development needs. The intention of the development area is to allow for industrial and

related commercial land uses. The 2018 amendment increased the “2017 Construction Extent” originally defined in the April 2017 by-law, and added a “Future Kennel Zone”, which is intended to be a 5-10 lot subdivision intended for dog teams and kennels. Phase 2 will see the creation of 40 saleable lots.

5.3 Residential Areas

Distinct residential areas are found throughout the City of Yellowknife, defined by the people, landscape, road networks, and history of development. While each are known and recognizable, there is often not distinct boundaries to each neighbourhood. Each area will continue to change and evolve as the broader city changes in future decades. **Figure 5.3** has been included within **Appendix B** and which details the extent of these residential neighbourhoods within the City.

Downtown: Most of Yellowknife’s residential areas are located outside of the Downtown. The City has implemented a residential intensification project to increase the residential development in the Downtown by lowering taxes paid by developers.

Old Town: Development in Old Town originated on the original footpath network and today contains a mix of residential buildings of various generations and scales alongside commercial buildings. Commercial sites in this area have docking and mooring activity for floatplanes and fishing boats, as well as houseboats and recreational boats.

Latham Island: Located adjacent to Great Slave Lake, Latham Island consists of a variety of housing forms. The N’dilq First Nations community (see **section 5.10**) is located on the northern tip of Latham Island, and is subject to the Akaitcho Interim Land Withdrawal (see **section 5.13**).

School Draw: Located east of Downtown and physically limited by rock outcrops, water and downtown, it is a somewhat contained residential area. The City has identified this area as a development opportunity for single or multi-unit dwellings as the site is conveniently located in walking distance to Downtown and has ready-access to infrastructure services.

The Northlands Trailer Park: To accommodate mobile homes in the City, the trailer park area was created south of Frame Lake and consists of small lots which were recently serviced.

Frame Lake South: This residential area is made up of a variety of housing types including row houses, duplexes and single-detached homes, and apartments. The development is located in close proximity to schools and commercial facilities, parks, and recreational areas. The airport limits westward expansion.

Range Lake North: This area is comprised almost exclusively of single-detached housing, surrounded by a recreational area with a trail network and large park. Further development is limited by the airport.

Annex and Forrest Park: These are mature residential areas containing a variety of housing types, alongside schools and recreation areas.

The Twin Pine Hill: This area was developed as a multi-family residential area with the recent construction of 21 low-rise multi-unit buildings, totalling 126 units. The area had previously been identified as a short-term development priority in the Smart Growth Redevelopment Plan, with a goal of adding 75 units to the area. The development required a rezoning, which was approved by Council in 2015. The surrounding undeveloped land is zoned to permit nature preservation, and the development of major institutional services.

Niven Lake: The Niven Lake area consists primarily of residential land uses. The most recent development, Phase 7, saw the addition of 31 lots to Stirling Court and Moyle Drive, all of which are sold.

Waterside Residential: In 2012 the Zoning By-law was amended (No. 4677) to accommodate low density residential dwellings that have immediate access to outdoor and water recreation, designated as the Waterside Residential – Low Density (R0) Zone. Waterside Residential lots are still required to abide by minimum waterfront setbacks.

Kam Lake: This area is a mix of residential and commercial and industrial uses, developing over time from an originally industrial area at the edge of the City. This mixed-use neighbourhood is identified in **Section 5.4** below.

Non-serviced residential areas: Old Town, Latham Island, Ndilo, Grace Lake and the Con and Rycon Trailer Park receive trucked water delivery and sewage pump-out. The trucked water and sewage in these residential areas serves approximately 680 residents. A water supply line is provided north of School Draw Avenue, in Old Town and on Latham Island. The water supply line is only operational from May to September. Trucked water is used outside of these months in this area.

5.4 Mixed Use

Kam Lake consists of a mix of land uses; light industrial uses are generally found north of Kam Lake Road and heavier industrial uses are located south of the road. Commercial and residential uses are also present in the area, which has resulted in land use conflicts. The new Engle Business District is intended to remove some heavy industrial uses from areas that could result in land use conflicts.

In 2012, By-law No. 4674 amended the Zoning By-law to include the Kam Lake Light Industrial/Commercial Mix designation (KL). The designation provides an area for commercial, light industrial and compatible uses, with provisions for accessory residential use. The area that was designated to the new zone during the amendment previously fell under the Growth Management, and Industrial designations. Lands zoned KL are located in the southernmost portion of Kam Lake, adjacent

to the Grace Lake North Development. These lands formed the Enterprise Drive Extension Development Scheme area.

Several dog kennels are located in Kam Lake, which have contributed to land use conflicts as residential uses encroach nearer. Kennel uses have been removed as a conditionally permitted use from I, LI and KL zones, however existing kennels remain as legal non-conforming uses. The City has previously considered the relocation of dog kennels to an industrially-zoned, 5-10 lot subdivision primarily intended for dog teams and kennels as part of the Engle Business District Phase 2 development. The intention was to locate future kennels somewhere somewhat isolated from other land uses to avoid conflicts associated with noise, odors and safety concerns. Additional considerations included well-drained ground, shelter from prevailing north-east winter winds, and direct access to the summer and winter trail networks.

However, the Engle Business District will not support caretaker suites due to the proximity of existing (fuel) tank farms and the potential for additional bulk fuel storage under the General Industrial zoning in the Engle Business District. As such, this location will not serve the reported needs of the industry. The Yellowknife Dog Trotters Association (YKDTA) has participated in consultation throughout the Community Plan exercise and previous engagement meetings. Throughout this engagement, the YKDTA has identified that their current location is preferred, providing access to trail networks, proximity to existing kennel and support uses, while allowing caretaker accommodation and that a relocation to Engle is not feasible for these reasons. At the August 26, 2019 Council meeting, Council passed a motion to sell YKDTA the parcel of land they currently lease.

5.5 Commercial Areas

Commercial development outside of the Downtown is primarily concentrated along Old Airport Road in the form of large, single-storey, retail establishments. The intersection of Old Airport Road and Range Lake Road is a significant node of commercial development. Strip commercial and large retail anchors such as Wal-Mart, Canadian Tire and an Independent grocery store characterize the area.

The Old Town has a mix of small commercial establishments. Some of these businesses primarily serve tourism traffic, with restaurants, accommodation and boutique type retail. A number of service-type businesses form part of the Old Town mixed-use, including building supply, camp re-supply and other services. Air and water charter companies that operate passenger and freight traffic, occupy property along the shoreline.

There are also a number of retail and service businesses in the Kam Lake Industrial Area, which are mixed with other industrial uses and residential land uses. The new Engle Business District and Enterprise Drive Extension have provisions for commercial land uses.

Tourism-related development is primarily located in Downtown and Old Town, and consists of visitors' centres, travel agencies, tour operators and hotels. Tour operators associated with dog sledding are also located in Kam Lake; see previous section (5.4 Mixed Use).

5.6 Industrial Areas

Industrial land uses have been primarily located in two areas: adjacent to the airport and in the mixed use area of Kam Lake. Industrial uses that are directly associated with the airport are generally located at the intersection of Highway 3 and Old Airport Road. The Kam Lake Industrial Area, located in the south end of the City, contains both light and heavy industrial uses and has been subject to land use conflicts due to the proximity to residential areas. The Kam Lake area is transitioning out of industrial uses and is now mixed use (commercial and residential).

To help address the short supply of available industrial lands, the Engle Business District was developed, which permits industrial uses, and is located at a greater distance from residential areas and in close proximity to trucking routes. There are two phases to the Engle Business District, Phase 1 which was completed and fully developed by 2016, and Phase 2, which has now been partially built out and purchased. Additional lands may be made available as demand rises along the Deh Cho Boulevard area, serving industrial and commercial needs for the City of Yellowknife's future.

5.7 Mining Activity

The City of Yellowknife is located within a geologically rich area, and has further developed due to mining activity within the City and region. **Figure 5.7: Mineral Tenure (Appendix B)** provides an image of current subsurface Mineral Claims and Mineral Leases which occur within the municipal boundary. Mineral Claims are staked lands which require annual geoscience reporting and demonstration of work (\$10/ha for first 2 years, and \$5/ha for each subsequent year) and if valid can be held for up to 10 years. Once \$25/ha in work has been completed an application for 'taking a claim to lease' may occur, with leases valid for 21 years with unlimited renewals. Once a claim becomes a mineral lease, there is no longer any annual geoscience reporting requirement, or work requirements, however fees are imposed of \$2.50/ha/year. These land tenure rights are for subsurface areas, with no guarantee of surface access, and while not directly limiting surface land uses, their current or potential future use may impact upon other land uses in the City.

5.8 Downtown Designation

Downtown Yellowknife is the most urban area in the NWT. Placed on a grid system, the area consists of a mix of commercial retail, office and institutional land uses alongside low and high density residential uses. Despite being a focal point for the City, the Smart Growth Plan, released in 2010, outlined several obstacles facing the Downtown area, including the low concentration of residences, the loss of commercial services to non-downtown areas, and perceived safety issues, among others. The Plan outlined numerous recommended actions, which included the redevelopment and revitalization of the

Downtown core by encouraging reinvestment, residential intensification and mixed-use development. Subsequently, a variety of downtown revitalization, business incentive, and tourism marketing studies have been undertaken focussing on improving the retail and business environment within the downtown core. The results of this work corroborate past studies which encouraged additional residential development and work with land owners toward creating retail spaces that meet the needs of local business:

- 50th Street/50th Avenue Revitalization (Aug. 2015)
- Business Incentive Strategy and Business Incubation Strategy Framework (Sept. 2015)
- Destination Marketing Strategy (Apr. 2016)
- Retail Revitalization (2019 - ongoing)

Development needs in the Downtown have shifted over the years, and in 2011, an amendment to the Zoning By-Law created the Downtown Zone, which defines the downtown area as the principle office, commercial and entertainment district in the City. The area supports medium and higher density residential uses and all development in the Downtown zone is subject to design regulations that intend to ensure buildings are interesting, appealing and that the street environment is oriented towards pedestrians. The design regulations include consideration for amenity space, massing, building articulation, facades and materials, signage, wind protection, sun and penetration.

As the City continues to evolve, it will be important to ensure that development needs Downtown continue to be met to ensure that changing socioeconomic conditions, such as the increased prevalence of the tourism industry, are supported.

5.9 Open Space, Parks and Trails

Natural areas contribute to creating a sense of place and improved quality of life, they perform valuable ecological functions, they serve as important habitat, and they contribute to economic sustainability.

Figure 5.9.1 and 5.9.2, Appendix B illustrates the parks and connecting trails which occur throughout the City. Important open spaces also occur throughout the City, including Tin Can Hill, Capital Area lands and parcels surrounding Range Lake and Grace Lake.

5.9.1 Open Space

The City is surrounded by public wilderness lands and the landscape of steep rock, permafrost, lakes and marshes contribute to land being difficult to develop and consequently contributes to the retention of open space within the City (see **Figure 5.9.1, Appendix B**).

In 2005, an Ecological Resources Inventory (ERI) was produced for the City, which identified 40 sites that are considered urban natural areas, distinguishing them from natural areas that are not yet integrated into the urban areas of the city. The 2010 Smart Growth Plan Natural Area Preservation Strategy built off this work, providing guidelines for delineating the sites, and adding or editing others. The study divided the land within the municipal boundary into development zones and determined that 69% of the City

consisted of non-urbanized areas that are largely in a natural state. 1,164 hectares of natural area sites were identified in the report. At the time the study was completed, this amounted to approximately 61 hectares of open space per 1,000 people.

The study suggested policy directions and guiding principles to serve as a foundation for future decision-making in regards to the on-going protection of natural areas in the City and what to protect; a component of this included providing recommendations for several sites that should be subject to a high level of protection from development. Sites recommended for a high level of protection are listed in **Table 3**; these sites meet specific conditions warranting extra protection.

Table 3: Sites Recommended for a High Level of Protection

Lakes, wetlands or shorelines: Willow Flats Shoreline Peace River Flats Shoreline School Draw Shoreline Latham Island East Shoreline Back Bay Shoreline Joliffe Island Shoreline and Dog Islands Rat Lake Tin Can Hill Shoreline Mosher Island Shoreline Yellowknife Bay and Islands Range Lake	Site is needed to meet an area target: Gitzel Outcrop Kam Lake Road / Old Airport Road Niven Lake North Square Con Road West Con Road East (Diamond Ridge) Toboggan Hill
	Combination of conditions: Yellowknife Ski Club Niven Lake
Steep slopes: Niven Lake East (Fritz Theil Rock) Bush Pilot Monument McAvoy Rock Ski Club/ Jackfish Ravine	Within environmental setback: Balsillie Court and east of airport

Sites recommended for partial protection are also identified in the full report (City of Yellowknife, 2005).

5.9.2 Parks and Trails

The City maintains a number of local parks that consist of neighbourhood parks with play equipment, recreation facilities, toboggan hills and outdoor ice rinks, tennis courts, boat docks and outdoor spaces associated with city facilities (see **Figure 5.9.2, Appendix B**). **Table 4** provides a list of City parks.

Table 4: City Parks

Bush Pilots Memorial Park	Fritz Theil Park
Rotary Centennial Waterfront Park	Somba K'e Park
Mitchell Drive Park	Olexin Park
McMeekan Causeway	Forrest Drive Park
Latham Island Park	Knutson Court
Pilot's Monument	Horton Crescent Park
Raccine Park	Jeske Crescent Park
Otto Drive Park	Parker Recreation Field
Watt Drive Park	Bristol Monument Park
Hank Koenen Park	Yvonne Quick Heritage Wharf
Grace Lake Playground	Con Playground
Orser Park	Josephine Walcer Park

Other recreational lands in the City include tracts of land that are leased from the City by the Yellowknife Ski Club, the Yellowknife Golf Club and the Yellowknife Shooting Club. There are also two Territorial parks in the City; the Fred Henne Territorial Park, which is situated between Long Lake and Highway No. 3, and the Yellowknife River Territorial Park Day Use Area, located at the Yellowknife River Bridge along Ingraham Trail. Fred Henne provides camping and day use facilities, and the riverside park provides day use facilities.

Yellowknife also maintains an expansive trail network that is slated for future expansion; see **section 5.14.10** for more information.

5.10 Waterfront Areas

A Waterfront Management Plan was adopted in 2001 to plan for future development and redevelopment of waterfront lands along Great Slave Lake that lie within the municipal boundaries. The objectives of the plan included ensuring access to the waterfront in appropriate locations; establishing land use and development controls along the shoreline of Great Slave Lake; and identifying areas that need to be protected from development.

During the 2011 General Plan update, a Harbour Plan was being developed to repeal and replace the Waterfront Plan. The *Harbour Plan Stage 1 – Background Report & Implementation Strategy: Vision and*

Frameworks is structured into six guiding frameworks and an implementation strategy providing 43 recommendations that cover Natural Heritage, Parks and Open Space, Trails, Arts, Heritage, Tourism and Culture, Harbour Uses, Neighbourhoods and Districts, and Implementation. Implementation of the Harbour Plan is anticipated to occur over an extended period of time (i.e. 20 years). Five priority tasks were identified in the report for short term implementation and were adopted, as amended below, on March 26th and April 2nd, 2012:

1. Purchase the Giant Mine Marina Site concurrently with exploring Mosher Island as an alternative marina site;
2. Establish a Memorandum of Understanding seeking jurisdiction over the Yellowknife harbor;
3. Pursue a float plane/small boat marina along currently existing public land on Back Bay at the southern end of Latham Island, pending the following:
 - a. Further discussion with the NWT Floatplane Association and adjacent neighbours regarding design and operations; and
 - b. Final approval of Council.
4. Seek municipal tenure to the Department of Fisheries and Oceans property (the Government Dock; Lot 10 Block A Plan 3801) and clean it up; and
5. Maintain and upgrade the existing parks with priority given to Pilot's Monument, Wiley Road parcel (Lot 5 Block D Plan 70), Otto Drive Park (Back Bay), and the Yellowknife Rotary Waterfront Park.

5.11 Ndilo Designated Area

The community of Ndilo is located at the northern end of Latham Island and is a Yellowknife's Dene First Nations (YKDFN) settlement. The City recognizes YKDFN authority over the Ndilo community. Land uses and development proposed on Ndilo designated lands are subject to approval of the First Nation. City Council or the Development Officer may provide input regarding any proposed development.

Lands comprising Ndilo are described as Lot 500 within municipal parcel layers and currently occur within the City of Yellowknife Municipal Boundary. The City recognizes that through the Akaitcho Treaty Negotiation and Final Agreement, lands may be withdrawn from the municipal boundary, including Lot 500 and may become YKDFN managed lands.

5.12 Growth Reserve

The previous General Plans have identified land intended to accommodate community growth beyond a 10-year horizon as Growth Reserve. Lands under the Growth Reserve designation are included based on growth projections but are not required for the immediate life of the Plan. The Plan generally restricts development in these areas to not impede future development opportunities, and any future development of the lands are subject to further study. Growth Reserve lands are zoned Growth Management (GM) in the Zoning By-law.

The 2011 plan identified three key sites, one of which has been rezoned pursuant to By-law No. 4810. The two remaining growth reserve areas are:

- Tin Can Hill – 56 hectares of land located south of School Draw Avenue; and
- Con Mine Infill – 25 hectares of land located south of Forrest Drive and Taylor Road.

Two amendments to the Growth Reserve have been made since the adoption of the 2011 Plan in order to permit development. In September 2014 By-law No. 4810 amended the Plan to change the land use designation of an area known as Bristol Pit from “Growth Reserve” to “Mixed Use”. In November 2015, By-law No. 4868 amended the Plan to redesignate lands south of Grace Lake (Phases 1-3) from “Growth Reserve” to “Waterside Residential” and “Natural Areas”.

5.13 Akaitcho Interim Land Withdrawal

Prior to the early settlement of Yellowknife as a location for gold prospecting camps, the lands in and around Yellowknife were known and used by the Akaitcho Dene First Nation people. First Nation peoples across Canada have been re-establishing links to ancestral territories that have cultural, resource, and spiritual significance to their people. As such, the First Nation has entered into negotiations with the Government of the Northwest Territories and the Government of Canada, resulting in the interim land withdrawal of approximately 1,034 hectares of land, some of which lies within municipal boundaries. An interim land withdrawal is a way to prevent the creation of new interests on lands while negotiations for land selection proceed.

The City of Yellowknife is supportive of the fair, equitable, and timely settlement of the claims of Aboriginal Peoples and is committed to building a strong and cooperative working relationship with all Aboriginal Peoples, based on a mutual understanding of each other’s values and traditions.

The close proximity of lands included in the interim land withdrawal indicates the potential for the City to be involved in agreements for the service and infrastructure provision to residents and property. Additionally, there are practical considerations of having to cross through First Nations land to access City assets that may have implications for the Community Plan. For further review please consider the current spatial details of the Interim Land Withdrawal as provided within **Figure 5.13, Appendix B**.

Further, as noted above and in Section 8.1, the community boundary is currently being revised with YKDFN Council Resolution 2019-06-19-002 and City of Yellowknife Council Motion 0177-19 directing City Administration to jointly seek a revised boundary between the communities, which includes some of the Interim Land Withdrawal areas.

5.14 Transportation Network

5.14.1 Major construction Activities

The Highway No. 4 realignment opened on January 31, 2014, connected to Highway No. 3 near the entrance of the Fred Henne Territorial Park. The realignment was developed to bypass the Giant Mine area, and the underground arsenic trioxide storage chambers. Further improvements have been undertaken since 2015 on Highway No. 4 from Km 40 to 55 including resurfacing, chip sealing, and improving drainage, valued at \$8 million.

Highway No. 3 connects Yellowknife to the territory's Highway No. 1, and to the rest of Canada's road network. Reconstruction work to strengthen and improve drainage along over 100 km has been ongoing since 2015, with anticipated completion in 2019.

The Dettah access road which provides all-season access to the YKDFN community was reconstructed and chipsealed in 2017. The Dettah Ice Road, continues to be improved each year, with additional widening of this seasonal route, and in 2019 a tourism pull-off added for improved vehicle and pedestrian safety.

5.14.2 Parking

Review of downtown parking circumstances and demand have been undertaken by consultants in previous downtown economic and parking studies, as residents and businesses have previously cited parking limitations as a reason for the declining downtown core. This background report will not revisit the results of those historical reports, however acknowledge that a reported 40% of serviced development land within the downtown area is comprised of surface level parking. These amounts of parking lands have increased in recent years, even within disincentive policies which no longer support the conversion of structures to a parking use.

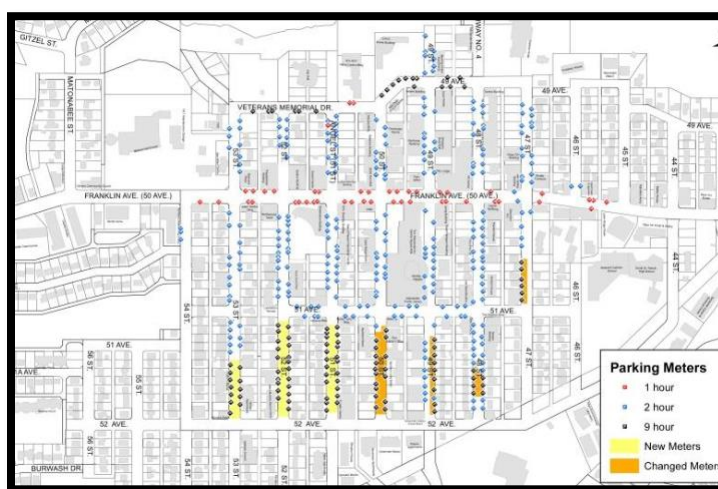


Figure 66: Parking Meters in the City of Yellowknife

The City offers 1 hour, 2 hour, and 9 hour parking meters. Franklin Ave. is equipped with 65 1 hour meters; streets adjacent to Franklin Ave. (47 St. to 53 St., and 51 Ave.) are equipped with a total of 486 2 hour meters; with 272 9 hour meters located the furthest from the downtown core, along Veterans Memorial Dr., and 47 St. to 53 St. between 51 Ave. and 52 Ave. Parking outside of these areas is free (7451 non-metered spots), with only policies regarding street maintenance, and traffic flow requiring vehicle relocation.

The City's free mobile app, Pingstreet, was updated in January 2018 to allow for parking payment through the app, in collaboration with Mackay Pay. Downtown parking meters were upgraded to accommodate this new mobile payment system beginning January 2, 2018, with all meters upgraded as of March 2018. Monthly and annual parking passes for 9 hour meters are available for purchase from the City.

To encourage downtown commuters to leverage 9-hour parking meters further from the downtown core, the City reduced the hourly rate of these meters to \$0.75 per hour in 2015. The 1 hour and 2 hour meters on and adjacent to Franklin Ave. have an hourly rate of \$1.25 per hour. Proposed changes to these rates have been approved by Council in April 2019, with changes taking effect on July 1st. Changes are expected to raise fees from \$1.25 per hour to \$2.00 for 1 and 2 hour meters, with no changes planned for the 9 hour meters.

5.14.3 Existing Road Layout

Primary arterial roads are those which service higher volume, medium to high speed traffic flows throughout the City: Highway No. 3, Highway No. 4, Old Airport Road, Kam Lake Road, and Franklin Avenue. Collector roads include Forrest Drive, Finlayson Dr., Borden Dr., and School Draw Ave.; these roads provide moderate traffic capacity and connect arterial roads to local roads, the third level of road designation. **Figure 5.14.3 – Road Classifications within Appendix B** shows the City of Yellowknife road classifications, which are described in detail below:

- 56.6 km Arterial; with a further 0.7 km divided;
- 56.3 km Collector; and
- 70.3 km Local.

There are a total of 183.9 km of roads within the City Boundary, with some maintained privately and others by the Territorial Government. However, the vast majority of roads are maintained by the City of Yellowknife. Of the above noted road types, these roads are surfaced in the following ways:

- Arterial Roads: 46 km paved, 11 km chip sealed;
- Collector Roads: 35 km paved, 20.6 km gravelled, 0.7 km chip sealed; and
- Local Roads: 50.7 km paved, 18.5 km gravelled, 1.1 km chip sealed.

Continuous updating to this road network occurs through the City's Annual Capital Projects/Paving Projects. This annual program attempts to fix the existing system and expand the road network to better service resident and business needs.

5.14.4 Winter Access Roads

The Dettah Ice Road is 6.2 km long, and connects the City to the community of Dettah. The ice road connects to School Draw Ave. in Yellowknife, and is historically open for four months of the year from December to April, however these operating months are weather dependent, and are projected to become reduced due to warming associated with climate change.

The Tibbett-Conwayto Ice Road connects Yellowknife to northern diamond mining operations. The road which is 600 km in length, connects to the territory's Highway No. 4 (Ingraham Trail), and is expected to allow the transport of over 10,000 truckloads of goods to the mines in 2018. In 2016, the road experienced a historic low in operating days (51 day operating period) due to elevated winter temperatures 4°C above normal (Mesher (2008) Ice Road Assessment, Modeling and Management. EBA Engineering Consultants).

The Prairie Climate Centre Climate Change Report for the City includes a summary of temperature data from 1976 to 2005, and temperature projections for 2051 to 2080, summarized in **Table 5**. With reductions in the number of days below-zero and of days below -30°C, the time frame to form the minimum required 6 inches of ice for vehicle travel is reduced, as is the operable time frame.

Table 5: Change and Predicted Change in Number of Days with Temperatures of -30

Change	1976 – 2005 Data Mean	2051 – 2080 Projection Mean	Percent Change
Number of -30°C days per year	51	14	-73%
Number of below-zero days per year	227	198	-13%
Typical coldest winter day	-43.6°C	-37.3°C	-14%

5.14.5 Bike Lanes

In 2013 the City developed a 5-Year Bike Lane Development Schedule, identifying roadway and greenway adjustments to improve cycling around city streets. This Schedule resulted in the following completed and proposed actions:

- 2014 - Roadway reconstruction along 52nd Avenue from 56th Street to 48th St., and along 50th St. from 52nd Ave. to 51st Ave.
- 2015 - Roadway reconstruction along 52nd St. from 52nd Ave. to 51st Ave.
- 2017 - Greenway trail (east side) along Kam Lake Road from Curry Drive to Old Airport Rd.

- 2017/2018 - Roadway reconstruction along Franklin Ave. (50th Ave.) from Old Airport Rd. to Forrest Dr.
- 2018 - Roadway reconstruction along 47th St. from 52nd Ave. to Veterans Memorial Dr. (49th Ave.), and development of Greenway Trail and highway shoulder along Highway No. 4 from Veterans Memorial Dr. to Highway No. 3, and continuing along Highway No. 3 to Old Airport Rd.
- 2019 - Roadway reconstruction along School Draw Ave. from 49th St. to 4301 School Draw Ave.

The completion of all components of this proposed bike lane plan has not occurred to date, and relies on the completion of associated roadwork. The City is currently in the process of developing roadway standards which will establish firm requirements for future road corridors. Standards will require a complete streets approach to development and road redevelopment, incorporating additional transportation options (walking, biking) within transportation corridor development. Further, the recent Trail Enhancement and Connectivity Strategy prepared for the City of Yellowknife received public input regarding how to expand the existing trail and bike lane network. Recommendations encouraged improving existing experiences and addressing network gaps which were prioritized for City Administration's action in 2019.

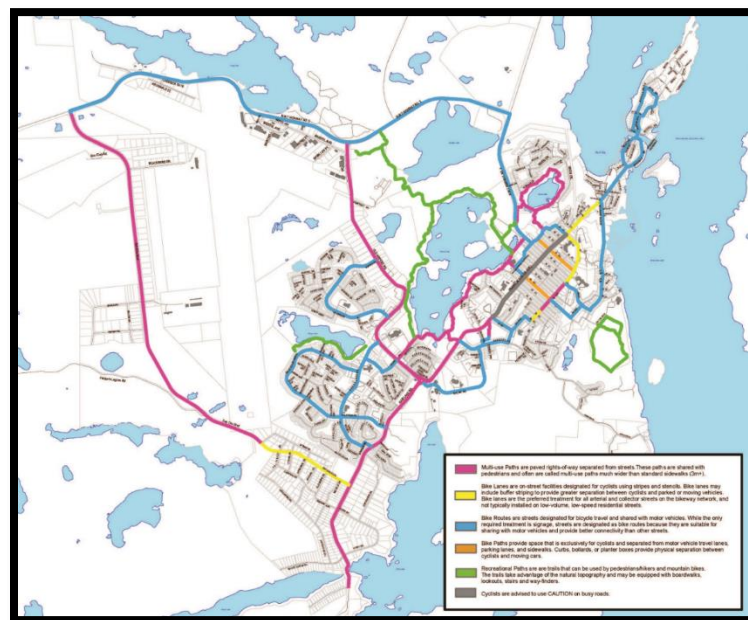


Figure 67: Yellowknife Active Transportation Routes, 2017

Other existing bike lanes include:

- Franklin Avenue from McDonald Dr./Wiley Rd. in Old Town to 45th St.;
- Franklin Avenue from McNiven Beach Park to Coronation Drive;
- Deh Cho Boulevard from Kam Lake Road to Utsingi Drive; and
- Along Old Airport Rd., from the Co-op corner (324 Old Airport Rd.) to Bristol Avenue.

The City of Yellowknife currently reports comparatively high rates of active transportation (approx. 25%), however only 2-3% of that is comprised of individuals biking. Increasingly, cycling is changing within the City, with interest in fat-biking and a continued interest in the development of a mountain biking facility at Bristol Pit. Improving cycling accessibility and safety in the City may reduce the number of cars used for transportation. This may reduce the regular wear of roadway surfaces, reduce roadway congestion, and extend the life of paved surfaces.

5.14.6 Truck Route (Engle Business District Access Road)

The *Highway Traffic By-law No. 4063* as amended states that large trucks used for commercial or public service with a weight exceeding 4,500 kg (identified as “NSC vehicle” in the bylaw), are only permitted on the following roadway sections:

- Old Airport Road from MacKenzie Highway to Franklin Avenue;
- Kam Lake Road;
- Franklin Avenue from Old Airport Road to 48th Street;
- 48th Street from Franklin Avenue to 49th Avenue;
- Forrest Drive from Franklin Avenue to Con Road; and
- Con Road from Forrest Drive to Yellowknife Bay.

Departures from the truck route are permitted when dealing with customers, businesses, and vehicle repairs, or with permission from the City. These departures must follow the most direct route of travel.

5.14.7 Air Transportation

The Yellowknife Airport (YZF) is identified as one of 26 airports in Canada included in the National Airports System, which defines strategic and essential air transportation infrastructure assets. The airport has two 45 m wide paved runways of 1,525 m and 2,290 m in length. Potential runway extensions to increase runway length to 3,050 m and 3,500 m respectively have been proposed, however no significant works have been pursued. Expansions to the airports are impacted by the limited availability of surrounding land and necessary setbacks from other infrastructure. Environment and Climate Change Canada recommends a minimum 3.2 km setback from landfills with bird control measures, or 8 km setback from uncontrolled landfills. An alternative detailed in *Guidelines for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the Northwest Territories* by Kent, Marshall, and Hawke (2003) establishes a minimum setback of 3 km from landfills. The 2017-2018 to 2021-2022 *Yellowknife Airport Five Year Business Plan* indicates that a strength of the City’s airport is its space capacity to accommodate these runway expansions.

In addition to commercial airlines, the airport supports charter flights, corporate and private aviation (including military and RCMP), and cargo services. The airport is also a critical link to many communities in the Northwest Territories: four communities rely exclusively on air and marine services, while 10 are accessible by road only through winter roads.

The airport is operational 365 days a year, and staffed from 5:30am to 11:30pm. Regular traffic is sustained in part due to regular shift work at nearby diamond mines. Passenger traffic has been shown to increase when there are poor winter road conditions, or when the winter road season is shortened. The City's aurora viewing tourism market is also expanding to new demographics, with Chinese tourism increasing dramatically since 2010. The City welcomed over 100,000 tourists between April 2016 and April 2017.

In 2017, Yellowknife airport improvement fees were incorporated into ticket prices. Revenue generated from these fees are used for projects which include increasing the parking lot capacity and the addition of a new air terminal building. The initiation of an airport user fee was undertaken to eliminate an operating deficit and make YZF a self-sustaining entity of the territorial government. The deficit was forecast to be eliminated in 2018, with accumulating surpluses to be used for identified aviation capital requirements.

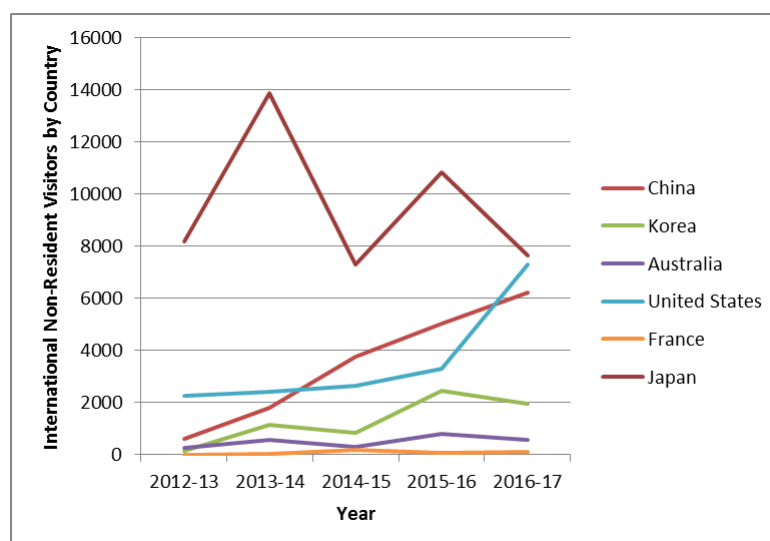


Figure 68: Airport Usage, Visitors by Country 2012-2017

While the closure of the Snap Lake Mine in 2015 may have led to a marginal decrease in airport traffic, increasing construction and activity at the Gahcho Kue Mine likely offset these losses. No available data is provided on local air traffic related to mine activities; however, it is foreseen that with the closure of the remaining diamond mines over the future 10 to 20 year time horizon, a reduction in traffic and volumes through the Yellowknife Airport will occur. Increasing levels of tourism may offset airport traffic, and result in greater revenues for the airport authority through higher landing fees from large aircraft originating from southern destinations.

5.14.8 Float Plane Harbours and Waterdrome

Public and private float plane docking, arrivals, and departures occur in Yellowknife Bay (East Bay) and Back Bay. East Bay and Back Bay form a licenced waterdrome for floatplane traffic. These areas are high use for other forms of transportation and leisure in summer and winter months, including canoeing, boating, sailing, paddle boarding, snowmobiling, walking, skating, and skiing. The strobe light at Pilot's Monument serves as a visual indicator for boating and other traffic of the departure or arrival of floatplane traffic, and is activated by pilots.

With amendments to the community boundary being approved by Council of YKDFN and the City of Yellowknife, amendments to these features await approval by the Government of the Northwest Territories. Through discussions with YKDFN it has been identified that a review of float plane waterdrome use in the city may be needed, as Latham Island and Joliffe Island would occur within the jurisdiction of YKDFN. Continued use of the waterdrome location would require additional approvals from the first nation community.

5.14.9 Public Transportation (City)

Public transportation serves as the main commuting option for 1.8% of Yellowknife residents aged 15 years and older, with busy periods servicing the downtown core in the early morning and evenings. This compares with national averages of 12.4%. Transit further supports school access for a range of students, at these same periods.

Yellowknife Transit operates three bus routes:

- Route A – Borden/Forrest
- Route B – Frame Lake/Northlands
- Route C – Old Town/Niven

These routes operated year-round, Monday to Saturday from 6:55am to 7:30pm, with no service on Sundays or statutory holidays. In

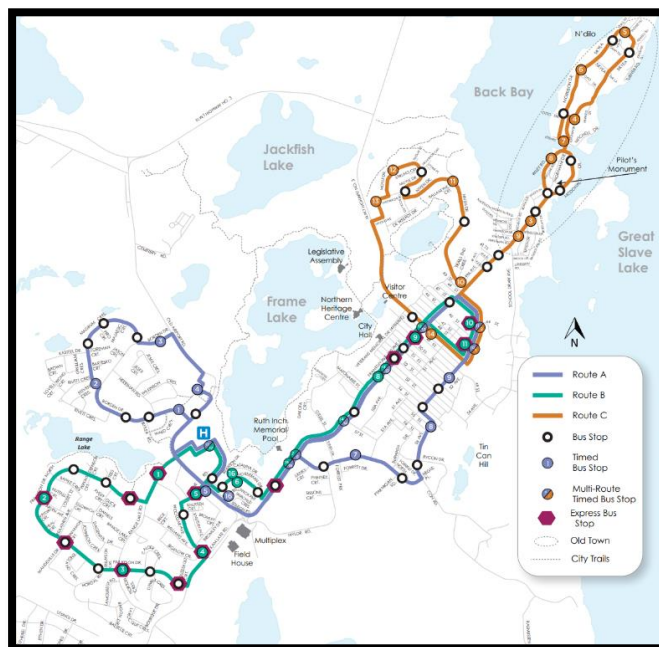


Figure 69: Yellowknife Bus Routes (Jan. 2019)

addition, there is a Route B Express Bus which operates during the school year (September to June), at the start and end of the school day only (7:50 am to 8:25 am, and 3:40 pm to 4:15 pm).

Yellowknife Transit also oversees Yellowknife Accessible Transit Service (YATS), which is a barrier-free transit service for persons with temporary or permanent physical or functional disabilities, who are not otherwise able to access public transit services. Prospective users must apply to be eligible to ride with

YATS. YATS transit operates Monday to Friday from 6:40 am to 7:10 pm, and Saturdays 8:00 am to 7:00 pm, and has an operating service area within 800 m of the existing fixed transit routes. Users must schedule a trip in order to use the YATS service. Yellowknife Transit and YATS are fare-based systems to ride.

The 2010 Transportation Improvement Study by HDR/iTRANS indicates that transit is the selected mode of transportation 1% of the time over a day, with 3 – 5% use during peak hours. A Yellowknife Transit Customer Survey was conducted in 2017, with 132 respondents. The highlights of suggested improvements are to:

- Increase bus frequency and extend service hours;
- Improve reliability and timeliness of service;
- Provide service to the airport and other additional routes; and
- Provide alternative forms of payment (electronic payment system).

Council identified in the 2019-2023 Goals and Objectives to *Redefine public transit*. This goal seeks to strengthen the transit service model to respond to user needs, and to attract new users to the system. Further study and user review may result in changes to the current transit system.

5.14.10 Trails

The City maintains an extensive and diverse trail system which serves walking, biking, cross country skiing, snowmobiling, snowshoeing and a variety of other users (See **Figure 5.14.10, Appendix B**). With recent trends toward all season biking (fat tire cycling), additional routes have been informally developed within public spaces and residents have continued to report an interest in an expansion to the existing trail network.

Yellowknife's trail network currently supports some of the highest active transportation commuting rates in North America, with approximately 24% (19.3% nationally) of residents using active modes to commute. However, this rate is in decline from past census periods (Statistics Canada, 2016). The City's maintained trail system covers over 25 km, and includes:

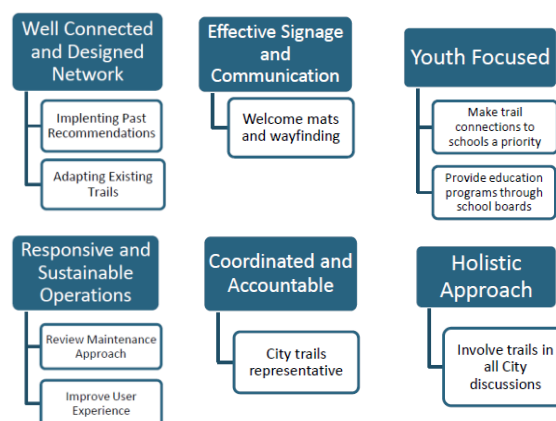
- McMahon-Frame Lake Trail (north and south sides);
- Frame Lake Winter Crossing;
- Niven Lake Trail;
- Range Lake Trail;
- Grace Lake Trail
- Tin Can Hill Trail System;
- Twin Pine Hill Trail System;
- Rotary Waterfront Park Boardwalk;
- Back Bay Trail System;
- Pilot's Monument Lookout; and
- Bristol Freighter and Jackfish Lake Trail System.

The McMahon-Frame Lake Trail is the only trail which is paved; with the southern section paved from Stanton Territorial Hospital at Byrne Road to the Northwest Territories Legislative Assembly. The Niven Lake Trail loop is currently the most accessible, although it requires a number of improvements to be fully accessible. The Accessibility Audit of 2017, reviewed city infrastructure including trails, made a variety of recommendations for improving trail systems for all residents. Recommendations encouraged the application of universal design to trails including:

- Trails are created for enjoyment by a broad spectrum of people;
- Recognizing users have different abilities which are accommodated where possible through a variety of trail types;
- Each trail user will have different abilities and some may not have access to trails;
- Does not mean making every trail available for use by every possible user; and
- Minimize as much as possible, potential users who cannot access the trail.

Multi-use pathways are trails which connect residential areas to business and downtown areas within the City and which are used for the purpose of regular commuting. Multi-use pathways are paved or hard surfaced and accommodate alternative modes of green transportation in addition to walking, such as bicycling, rollerblading, scootering, and wheel chair use. These trails are regularly maintained by the City to improve accessibility and safety, and the availability of overhead lighting is an important element for user safety and comfort. Currently, the section of the McMahon Frame Lake Trail from Stanton Territorial Hospital at Byrne Road to the Northwest Territories Legislative Assembly, sections of Franklin from McNiven Beach Park to the Bourque Drive easement on Kam Lake Road and Niven Lake Trail are the only trail areas designated as multi-use pathway in the City.

In the 2018 Trail Enhancement and Connectivity Strategy, the existing trail network was reviewed through the perspective of public perceptions, and interests for action. Recommendations highlighted action in following the elements identified above.



Improving user experiences was a key recommendation offered, through improved signage, wayfinding, lighting and maintenance of trails. Developing a trails coordinator position for centralized contact within the City and to work with schools to encourage commuting and programming use of trails. The Strategy was limited in its recommendations on winter trail use due to timing and available resources, however it recognized that Yellowknife is a Winter City, where greater winter trail pursuits should be supported. These include support for trails across Frame Lake, cross-country skiing and snowmobiling routes throughout the city and review of opportunities for winter skating trails and summer boat routes within the City.

The City of Yellowknife 2018-2019 budget identifies that the recommendations of the Trail Enhancement and Connectivity Strategy excluding the McMahon-Frame Lake Trail extension shall be adopted. The previously approved Twin Pine Hill Trail system was completed in the summer of 2018, including the installation of a viewing deck and stairs with a budget of \$509,000.

The McMahon-Frame Lake Trail extension, from Stanton Hospital to the Coop Corner has been deferred in successive budgets due to costs and potential impacts upon an Arctic Indigenous Wellness Foundation (AIWF) Centre proposed for the area. While extending the trail through this section of Frame Lake shoreline is supported by survey respondents, and recognized as a missing component of the City's trail network, the important role of the wellness centre will preclude the trail's completion until AIWF supports such adjacent uses.

The City of Yellowknife is currently developing transportation standards which will define trails and sidewalks as a component of the transportation system. Through the implementation of these standards, the City will work to integrate the discontinuous trail components within a cohesive transportation system with inclusion of alternative transportation options.

5.14.11 Snowmobiling

Snowmobiling is prohibited in the downtown core (bounded by 48 St., 54 St., 49 Ave., and 51 Ave.), on private property, on the ski club trail system, on golf course greens, on sections of the McMahon Frame Lake Trail and Range Lake Trail systems, and in tobogganing areas (ie. Bristol Pit) under By-law 3722. Snowmobilers are permitted to follow the marked trail which traverses the ski club trail system to access Back Bay. See **Figure 5.14.10 – Trails**, in **Appendix B** for locations of winter snowmobile trails within the City.

Snowmobiles must be plated and insured to be driven on City roads; snowmobilers must obey the rules of the road, wear a helmet, and limit speed on City roads to a maximum of 45 km/hr.

6.0 Infrastructure Servicing

6.1 Existing Sewage System

Subsequent to the completion of the previous two General Plans, the City of Yellowknife has grown with significant residential developments (Niven and Block 501) now being on piped service, while other developments including Engle Phase 1 and 2, and the Enterprise Drive Development scheme occurring on trucked services. **Figure 6.1 (Appendix B)** shows which areas have trucked services and which areas have piped services. Further infill locations where development may be accommodated include sites which have access to piped (downtown, School Draw, Tin Can Hill), or will require trucked services (CBC Lot, Engle Phase 2, Grace Lake, Con Mine). With growth reserve areas currently occurring at the periphery of the piped service boundary, investments in expanding the piped services and supporting infrastructure may be necessary in the near future. **Table 6** and **Table 7** below details development lands which will require servicing in the short term, and will place additional pressures on the existing service network.

Alternatively, the City will need to review their ability to service an expanded trucked service system. A review by the City's engineering services is currently occurring in 2019 to assess the options and costs for an expanded piped service network to accommodate areas of the city that currently rely on trucked services.

Table 6: New Lot Development with Trucked Services

Development Category	Location	Existing Vacant Parcels which currently rely on trucked services
Industrial	Engle Business District (Phase II)	17
	Kam Lake	1
	Airport Lands	Unknown
	Akaiitcho Withdrawn Lands	Unknown
Commercial	Intersection of Old Airport Rd. and Highway No. 3, adjacent to Bristol Pit	1
Residential	Grace Lake South Waterside Residential Subdivision	17

Table 7: New Lot Development with Piped Services

Development Category	Location	Existing Vacant Parcels with available (piped) services
Commercial	Downtown Lots (50 th Street)	3*
	Niven Lake Phase V Residential Subdivision	3 Parcels (Unknown)
Residential	Niven Lake Phase VII Residential Subdivision	5
	Hordal Bagon, on Spence Rd.	5
	Block 501	42
	Block 203/9 School Draw	Unknown

**Sold together*

The City's sewage and wastewater treatment facility is comprised of a natural lake lagoon and wetland system, known as Fiddler's Lake, with final discharge to Great Slave Lake. The facility is located off Highway No. 3, approximately 6 km west of the Yellowknife Airport.

The lagoon has a capacity of approximately 2.5 million cubic metres, covering 900,000 m². The contribution from precipitation is estimated at an average 355,000 m³ per year, to an upper range of 790,000 m³, based on a 2008 assessment by Dillon. As detailed in the 2018 Water Licence Annual Report, volumes of waste discharged to the Lagoon totalled 3,540,246 m³, which was greater than 2017 volumes of 3,026,144 likely due to increases in precipitation. Changes to precipitation frequency and volumes will impact the lagoon system, as there are no surrounding berms preventing overland flow from entering Fiddler's Lake. Population and sewage generation projections from this assessment indicate that there is adequate capacity in the lagoon to meet a population of approximately 25,000, and allow for 202 days of storage in the holding lagoons. However, increased inflow to the lagoon results in decanting operations being required during or immediately after spring thaw, which is expected to reduce the performance of the wetland.

Further infrastructure investments may be required by regulators on the Fiddlers Lagoon Treatment system in order to address the deficiencies listed above, and adapt the infrastructure to potential climate change scenarios. The City of Yellowknife is currently undertaking an assessment of the Fiddlers Lagoon Treatment system with a report due in 2019.

6.2 Water Supply

The City of Yellowknife receives potable water from the Yellowknife River. Piped water infrastructure includes six (6) pumphouses, three (3) reservoirs, fourteen (14) lift stations, and sixty-two (62) kilometers of watermain piping. Water may be drawn from Yellowknife Bay in an emergency, via Pumphouse No. 1. Current piping infrastructure is due for replacement in 2020, leading to two identified options for sourcing potable water for the City: replacement of current Yellowknife River piping, or switching the City's drinking water source to Yellowknife Bay.

In 2017, AECOM completed the City of Yellowknife Potable Water Source Selection Study investigating these two alternatives. The replacement of the existing submarine water pipeline from Yellowknife River was found to be the preferred option despite the higher life cycle cost of \$33 million due to the uncertainty of providing consistently adequate arsenic removal treatment, and the potential of major upset leading to arsenic contamination from the Giant Mine site. In March 2019, a funding commitment under the Disaster Mitigation and Adaptation Fund by the Government of Canada committed \$25.8 million toward the replacement option, supporting the submarine water pipeline to the Yellowknife River due to plausible risks that flooding on the Giant Mine site may lead to arsenic contamination in Great Slave Lake. Council passed a motion in May 2019 to replace the existing submarine water pipeline from the Yellowknife River.

The City opened a new water treatment plant in June 2015. The plant can supply 20 million litres of water per day, providing enough supply for more than 30,000 people. Disinfection in the new plant uses microfiltration and sodium hypochlorite, replacing the previously used chlorine gas, which required more stringent safety standards.

The majority of the City is serviced by piped water (See **Figure 6.2** in **Appendix B**); however Old Town (seasonally), Latham Island, Ndilo, Kam Lake Industrial Park, Grace Lake, Con and Rycon Trailer Park, commercial buildings at the airport, and some commercial buildings along Old Airport Road receive trucked water service. This equates to approximately 4% of the City's population (approximately 680 residents) not including commercial and industrial demands (approximately 1,600 employees). As part of the 2019 Engineering Services delivery review currently occurring, the impacts and options for future development on the water supply should be further considered. As with the sewage system (**Section 6.1**) described above, additional development will place additional demands upon the existing water treatment system.

6.3 Solid Waste/Landfill

6.3.1 Operations

The 2018 *Strategic Waste Management Plan* recommends that salvaging at the landfill remain an option within the defined salvage area, as an element of the City's culture, and to reduce the volume of material requiring landfilling. Organic material continues to make up approximately 40% of single family, multi-family, industrial, commercial, and institutional landfill-destined waste. This represents a good opportunity for increasing participation in the City's Centralized Compost Program.

6.3.2 Capacity and Remaining Lifespan

In 2014 a new landfill cell (Cell B) was approved, with construction of the cell beginning in 2016. The cell was designed to provide an additional 104,000 m³ of landfilling volume. Cell B is located on the southern end of the existing Cell A, with provisions for future landfill cell area on the western end of Cell B, upon completion of quarrying operations. Based on estimates of no additional diversion programming being implemented, the landfill lifespan is 10 years, to 2028, given a disposal rate of 753 kg/capita/year (SWMP, 2018). Should disposal rates (1100kg/capita in 2017) or diversion rates differ, lifespan analysis will need to be adjusted accordingly. An analysis of the adjacent quarry by Dillon (2006) indicated that the landfill capacity may be extended to 2046 by sustaining quarrying operations for 7.5 years.

Electronics recycling was introduced in February 2016; electronics are accepted at the Bottle Depot on Old Airport Road, and are transported to Alberta for final recycling. The City now accepts mixed plastics types 1 through 7, excluding type 6 Styrofoam. The addition of more items which may be recycled in the City reduces the volume of materials sent to landfill, thereby contributing to a longer landfill lifespan.

Changes to foreign acceptance of recycled materials in 2018 has substantially altered the recycling industry across Canada, and led to many recycling programs being reconsidered. Contamination rates in recycle systems are considered too high to effectively convert the materials into a consumer good and many jurisdictions are landfilling their recycled materials due to lower demand for used plastics. The City of Yellowknife had previously received payment from the shipment of recycled materials to Edmonton; however, it now undertakes these programs at a financial loss. Depending on the cost for shipping these materials, the City has suggested they may also have to consider landfilling such materials, which may impact the site's lifespan.

6.3.3 Centralized Compost Program

The City's Centralized Compost Program was developed in 2014, guided by the 5-year Centralized Composting Pilot Project completed by Ecology North in 2013. The centralized facility is located adjacent to the existing Solid Waste Facility. The program included the distribution of Green Carts to all single-family homes, with the following rollout schedule:

- 2014: Range Lake
- 2015: Old Town/Niven/School Draw

- 2016: Frame Lake/Grace Lake/501 (Hall Crescent area)/Northlands
- 2017: Downtown

The City is investigating opportunities to expand the Program to multi-dwelling buildings in the future. Since the Programs' inception, more than 400 tonnes of organic waste have been diverted from the landfill. Finished compost is sold to residents at an annual compost sale.

6.3.4 Historic Gold Mine Waste Management Areas and Demolition

The Con Mine Hazardous Waste Disposal Site (HWDS) cover was constructed in 2014-2015. Waste rock was leveled over the hazardous materials, and a concrete plinth and geomembrane liner were installed. The final clean rock isolation barrier and boulder barrier were completed in November 2015. The Robertson headframe of Con Mine was demolished on October 29th 2016.

In 2014, the deconstruction of the Roaster Complex at Giant Mine (10 above ground structures) resulted in the production of arsenic and asbestos impacted wastes, which were packaged in Transportation of Dangerous Goods bags. These bags were temporarily stored on site, and were removed as of August 2017. The demolition of the C-Shaft (headframe) structures occurred in 2015-2016. Asbestos containing materials were packaged, and transported and disposed of outside of the NWT. Arsenic contaminated wastes from historic mining activities were recontainerized in steel drums and plastic overpacks due to deterioration of the historic packaging. Disposal alternatives for this waste are being evaluated.

6.4 Emergency Services

The City's emergency services provided through the Fire Division include fire inspections, emergency medical response, fire response, and rescue services. The Fire Division responds to approximately 3,800 calls annually, the majority being emergency medical response calls, with an average response time of 7.5 minutes. The 2016 *Yellowknife Fire Division Master Plan* references the National Fire Protection Agency 'best practices' response time of 7 minutes; this response time results in challenges in reaching certain areas of the City within the recommended response time, including Ndilo (Latham Island), and the southern extent of Kam Lake. The Division is comprised of 28 full-time firefighters, and 15 on-call firefighters. Additionally, 1 Emergency Dispatch supervisor and 4 Dispatchers are employed within the service department.

- YKFD operates one (1) firestation, constructed in 1989 which includes Fire and Rescue, Ambulance Response and Dispatch Services. One (1) training facility is located on the Airport Lands, and is jointly shared with airport emergency response staff.
- Fleet includes: 2 engines, one pumper truck (for non-hydrant areas), mobile command, 2 tanker trucks (for non-hydrant areas), 3 ambulances and ancillary support vehicles
- 362 hydrants total (See **Figure 6.4** in **Appendix B**).

Areas that are on trucked water supply present challenges for the Fire Division, as tanker trucks must refill at the nearest hydrant to provide a pumping reservoir.

6.5 Community Facilities

The 2018 capital budget indicated that the Ruth Inch Memorial Pool had reached capacity several years prior, and a 2011 report indicated that the pool was expected to reach its life expectancy in 2020. In 2016, city council accepted federal funding (\$12.9 million) to replace the existing Ruth Inch Memorial Pool with a new aquatic centre, to begin development between 2019 and 2022. The City's 2020 capital budget is projecting a \$28,830,000 expenditure for the centre.

Redesigns in 2018, requesting 50 metre swimming lanes have raised initial cost estimates to \$49.8 million for the total project, with a doubling of the annual operation and maintenance costs to \$3.2 million from the current pool. Final detailed designs will still be required and the site for the facility confirmed either in the current pool's location or adjacent to the City's Fieldhouse and Multiplex Arena Complex on Kam Lake Road.

Further discussion has arisen regarding the City's current downtown library space, and options for better connecting this facility with residents and programming. No direction has been provided by council to date on making changes to this existing space. See **Figure 6.5** in **Appendix B**, City of Yellowknife Amenities for further reference to facilities locations throughout the City.

6.6 Parks and Recreation

Bristol Pit Snowboard Park opened with a tow rope in 2016, operated by the NWT Snowboard Association. This facility is used throughout the winter months, with additional programming now proposed in the summer season. A proposed bike park plan for Bristol Pit is being spearheaded by the Yellowknife Mountain Biking Club, with cooperation from the City, the territorial Department of Industry, Tourism, and Investment and private organizations and clubs within the City.

The proposed infrastructure at the bike park will include mountain bike amenities in the area. The Mountain Biking Club is anticipating construction of the new amenities will occur in phases, allowing riders to use completed infrastructure while others are being constructed concurrently.

See **Figure 5.9.2**, City of Yellowknife Parks and Trails, and **Figure 5.9.1** Open Space in **Appendix B**, for locations and reference details on the described city parks.

6.7 Drainage/Surface Run-off

Development which has occurred since the 2004 and 2012 Community Plans has resulted in changes to the drainage with areas of the City. These include Twin Pine Hill, Niven Lake, Tin Can Hill, the Engle Business District, Field House and Grace Lake amongst other areas. Paving of land, and development creates changes to natural water flows and snow accumulation which must be determined in pre-development assessments. Since 2004, greater than **87.04 hectares** of land have been converted from

natural areas to paved and developed lands. These pre-development grading assessments are completed based upon existing precipitation averages:

- Average annual precipitation is 150 mm of rainfall, 135 cm of snowfall;
- As described previously in **Section 4.9**, Climate Change is forecast to result in significant changes to existing average climate features, including the potential for precipitation to modestly decline (-9.5%), or significantly increase (17% to 35%) under different scenarios by 2080. While an increasing amount of this precipitation may fall as rain, the majority will continue to fall as snow, with much greater spring thaw events and localized flooding likely to occur;
- The City conducts a storm water effluent monitoring program, part of a Storm Water Management Plan as part of Water Licence requirements to which the Grace Lake area was added in 2017;
- The change from natural ground or dirt/gravel road to paved asphalt surface (87.04 ha) increases surface run-off due to reduced infiltration rates and volume; and
- With continued growth and urbanization, along with climate change related storm events, drainage infrastructure will need to be enlarged to accommodate for increasing volumes and frequency of storm events.

6.8 Granular Resources

Granular resources exist within and near to the City, however access to the resources are restricted due to existing land uses and ownership. Primarily, material is produced from seasonal blast and crush operations. As reported in 2004, the airport overlays a significant granular deposit, but extraction is limited.

There are three (3) operating granular areas within the municipal boundary. These are operated by the private sector under lease agreements with the City. An expansion of one lease agreement is currently being proposed in the southwest geographic area of the city, Lot 2, Block 569, Plan 4219. The resource is necessary for the viable development of the city, however impacts of this land use expansion must be weighed against future potential land uses within the neighbouring area. Other aggregate resources within the city, near to the Landfill face uncertainty due to material complications including acid rock generating potential.

Sand resources were previously extracted in an area along Highway No. 3, west of the airport, however it is not fully known how much of this resource remains.

The City should continue to work with industry to ensure appropriate resources and land areas are made available in the city to ensure appropriate and cost effective aggregate is available for future development and road maintenance within the city.

6.9 Cemeteries

Expansion of the Lakeview Cemetery was completed in 2012, with the addition of a columbarium and 20 burial plots. In 2017, the cemetery irrigation system was upgraded, and cemetery fees were increased. A Columbarium Park was initially proposed in the 2009 capital budget for the development of a columbarium at the Lakeview Cemetery. The installation would make use of land otherwise unavailable for burials, improved space usage at the Cemetery, and providing an alternative to in-ground burials. The 2020 capital budget has proposed \$100,000 for the Park.

The 2016 capital budget proposed a 12,000 m² expansion of the cemetery, increasing the lifespan of the facility by 50 years.

The Cemetery is located adjacent to Bristol Pit, which is experiencing increased visitation through existing and proposed winter and summer recreation infrastructure. Access to both Bristol Pit and the Cemetery is from Lakeview Cemetery Road, off of Old Airport Road. Increased annual traffic may result in increased wear on Lakeview Cemetery Road, leading to more frequent maintenance requirements, or the need to investigate the benefits of paving the access road to these facilities to improve the road longevity and usability. Increased noise due to members of the public engaging in recreational activities or due to the proposed construction activities at Bristol Pit may impact the atmosphere of the Cemetery, or result in noise complaints from community members using the Cemetery facilities.

6.10 Electricity

The City obtains electricity primarily from the Snare and Bluefish hydroelectric plants, operated by Northwest Territories Power Corporation (NTPC). Supplemental electricity in low-flow/drought conditions is provided through thermal generation by diesel. In 2012, the existing timber crib dam at the Yellowknife River headwaters was replaced by the Bluefish hydro dam, capable of supplying 20% of the City's electricity. The Snare Hydro System, located 140 km northwest of Yellowknife, is comprised of four separate hydroelectric plants: Snare Rapids, Snare Falls, Snare Cascades, and Snare Forks.

Drought conditions in 2014 and 2015 resulted in a higher than normal dependency on diesel fuel, which increased power costs for consumers. As such, the *North Slave Resiliency Study* was conducted in 2016 to determine if these low-flow conditions were anticipated to be the "new normal". The study found that low-flow conditions as experienced in 2014 and 2015 are expected to be periodic and that drought conditions are not likely to be sustained, thereby reinforcing that hydroelectric power remains a viable long-term power source. The study also investigated the financial viability of renewable energy sources (solar, wind, and biomass) as possible replacements to current diesel usage. The study concluded that diesel continues to be the most cost effective and reliable backup power source in the event of hydroelectric system failure. Liquefied natural gas is recommended as a possible alternative to diesel as a cleaner fossil fuel that also incurs some potential cost saving.

6.11 Phone/Digital Networks

The 2012 construction of the Deh Cho Bridge allowed for the introduction of fibre optic connection from Edmonton to Yellowknife, improving internet bandwidth and speed. Internet service plans are offered through NorthwesTel and SSi Micro.

The Northwest Territories experiences reduced internet speed in comparison to much of southern Canada. Continued rural internet and cellular investment incentives are offered by the federal government, and along with regulatory requirements for basic access (50mbps download and 10mbps upload) should result in improved network connections across the north and within Yellowknife.

6.12 Approved Infrastructure Additions

In review of the current Capital Plan and Budget, City infrastructure investments and upgrades are considered as part of their general need for additional lands within the City and changes to existing land uses. Sewer and Water upgrades are part of ensuring that future infill development or redevelopment can be accommodated, while community facilities provide additional services and resources for residents while also requiring land allocation. The below noted infrastructure spending provides direction for further sections of this report on additional land uses which should be accommodated, and interests of council, staff and residents are conveyed to realize potential changes to the City.

Table 8: Capital Plan Budget – Infrastructure 2019-2021

Year	Infrastructure	Value	Proposed Location
2019	Accessibility Implementation	\$584,000	Unknown
2019	Tommy Forrest Ball Park Upgrades	\$200,000	Unknown
2019	Folk on the Rocks Rehabilitation	\$200,000	Fred Henne Territorial Park
2019	City Hall Upgrades	\$175,000	City Hall
2019	Bike Park	\$45,000	Bristol Pit
2019	New Aquatic Centre	\$1,750,000	Unconfirmed
2019	Solid Waste Facility Upgrades	\$100,000	Existing Location
2019	Pumphouse #1 – Upgrades	\$500,000	Existing Location
2019	Water and Sewer Infrastructure Replacement	\$3,840,000	Various Locations
2019	Water and Sewer Federally Funded Capital Projects	\$425,000	Unknown
2019	Public Works Garage Upgrades	\$50,000	Public Works Garage
2019	Community Energy Plan Projects	\$470,000	Unknown
2019	Pumphouse and Lift Station Upgrades	\$50,000	Existing Locations
2020	Tommy Forrest Ball Park Upgrades	\$200,000	Tommy Forest Ball Park
2020	Accessibility Implementation	\$581,000	Unknown
2020	Columbarium Park	\$100,000	Lakeview Cemetery
2020	Bike Park	\$20,000	Bristol Pit
2020	New aquatic centre	\$28,830,000	Unconfirmed
2020	Water and Sewer Infrastructure Replacement	\$4,895,000	Various Locations
2020	Submarine Intake Line Replacement	\$14,000,000	Existing Location
2020	Community Energy Plan Projects	\$1,770,000	Unknown
2021	Accessibility Implementation	\$567,000	Unknown
2021	Range Lake Trail Upgrade	\$210,000	Range Lake
2021	New Aquatic Centre	\$19,220,000	Unconfirmed
2021	Community Energy Plan Projects	\$120,000	Unknown
2021	Water and Sewer Infrastructure Replacement	\$3,028,000	Hordal Road
2021	Public Works Garage Upgrades	\$50,000	Public Works Garage
2021	Columbarium Park	\$200,000	Lakeview Cemetery

7.0 Growth and Issues

Understanding future change, and building a strategy that identifies planning issues for the Community Plan Review.

7.1 Population Change

The City of Yellowknife is a northern frontier community, characterized as ‘increasing at a decreasing rate’, which is greatly affected by resource development cycles, and the activities of rural settlements across the Northwest Territories. In and out- migration traditionally is the greatest factor affecting population change with a low death rate, and high birth counterbalanced against migration patterns. Population declines were noted in the period from 1996-2001 (-6%), while the period of 2001-2005 saw population growth of 10%, with stagnating population change since that period (5% from 2005 to 2018).

These population cycles are expected in single or limited resource communities, with an increasingly greater role of government employment stabilizing the previous mining employment cycles. Past declines can be directly connected with the closure of gold mines in the City in the late 1990’s, and recent increases with the opening of diamond mines. Additionally, increases in tourism and a shift through devolution to more territorial control in policy development and service provision have also led to additional employment and support for in-migration from across the territory and external jurisdictions. Continued mine development including the relocation of mine head offices out of the city, may be counterbalanced by remediation work begun on Giant Mine and across the Territory, with continued cycles to such activities.

It has been noted that two significant demographic drivers have and continue to impact population change within the Territory, including a growing concentration in the regional centres and decreasing fertility, with a corresponding aging of the population.

The trend of declining rural communities is not unique to the Northwest Territories, nor is the **net-migration to urban centres** such as Yellowknife, as residents seek employment opportunities and perceived or real opportunities for youth and lifestyles. In the past 30 years the concentration of the territories population in Yellowknife has increased to 46%, while the other regional municipalities (Inuvik, Fort Smith, and Hay River) have experienced population declines of 18% and small communities have experienced a decline of 22%. These past population patterns are forecast to continue into the future, where by 2035 nearly half of the territories population (49.5%) will be concentrated within the City of Yellowknife. Regional centres and smaller communities are similarly forecast to experience population declines to 22% and 30%, respectively. The total Northwest Territories population is expected to only increase by 3.5% by the mid-2030s, with nearly all of the growth expected in the City of Yellowknife (10% growth forecast by 2035). This low rate of population growth has a range of economic and labour force implications for the territory, and servicing and land use implications for the City.

Population changes are even more pronounced amongst indigenous populations, where past trends have resulted in a concentration of First Nation, Metis and Inuit within larger centres. The share of total Indigenous population in Yellowknife grew from 10% in 1981 to 23% in 2016, with the trend expected to continue and Indigenous resident proportions to increase by 2035. This change in demographic and ethnic make-up will have implications on policy and programming in serving City residents.

Low to negligible growth rates across the territory, are negated in the City of Yellowknife by intra-territory migration, however even modest growth may result in social and economic hardships. Additionally, a fractured sense of community, and declining business growth, may lead to business closures and increasing homelessness on a scale beyond what has already been observed.

While migration out of small Northwest Territories communities, and across rural Canada, has a number of factors leading up to these decisions, a key factor remains seeking 'better' opportunities elsewhere for education, housing, employment and business development. For the Northwest Territories such opportunities are typically sought within Yellowknife and further south, with the City needing to ensure that all migration interests are being met within the region.

Increasing proportions of seniors are now found within communities across the Northwest Territories, particularly in Yellowknife. While proportions of those aged 65 and over in the City (5.7%) remain relatively low in comparison to national averages (16.9%), the proportion has more than doubled and it has been the fastest growing age cohort over the last 20 years. The number of those aged 45 to 64 years has increased significantly, which is the result of the aging 'baby boom' generation. In contrast, the share of children under 15 years has been steadily decreasing. During the 1991 to 2016 period, the proportion of those aged 0 to 9 years fell by more than 20%, while those aged 65 to 69 years increased by nearly 280%. The decrease in the number of children reflects a declining birth rate, while the growth in the older age groups reflects increased life expectancy for the general population. By 2035, the Northwest Territories is forecast to have more than 20% of residents over the age of 60 (9383 residents), an increase of 80% from the current 5193 residents aged 60 and over. While many of these seniors may remain in their communities amongst family and in their homes, many will require medical services and support within the City of Yellowknife, and may increasingly call the city home. This may create a major demographic need for services and programming which in the past was unnecessary, as a higher proportion of elderly residents moved south for retirement.

All of the above factors are recognized as likely impacts upon future populations within the City and Territory, however it is important to recognize that due to the small size of the City and Territory's population, even moderate developments and activities can have major implications and one new mine may alter current forecast models.

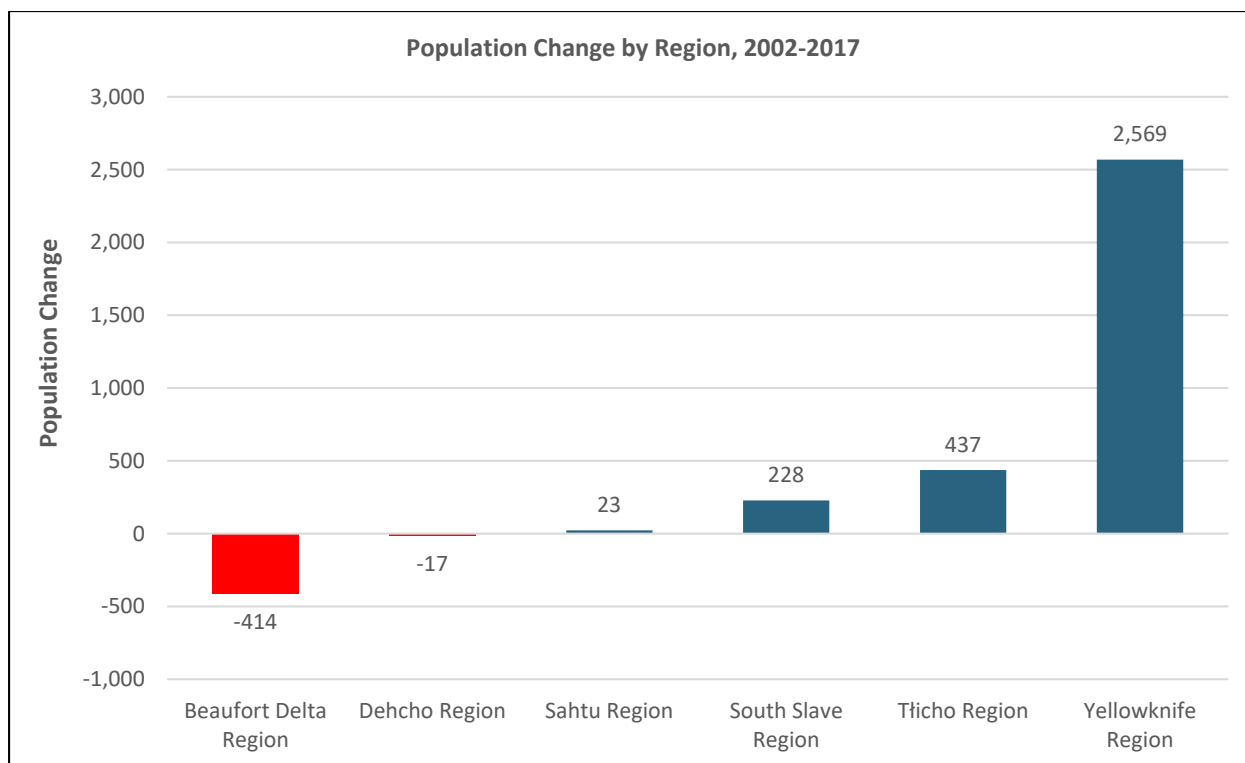


Figure 70: Population Change by Region, 2002-2017

7.2 Population Projections

This report incorporated population projections from the NWT Bureau of Statistics, as provided in March 2019. The NWT Bureau of Statistics uses the *Cohort Component Method* for population projections. This method makes use of three components within its modelling; fertility, mortality, and migration patterns. These assumptions are reflective of historical patterns, as well as recent trends observed within the Northwest Territories. This model is the standard projection method used by all jurisdictions.

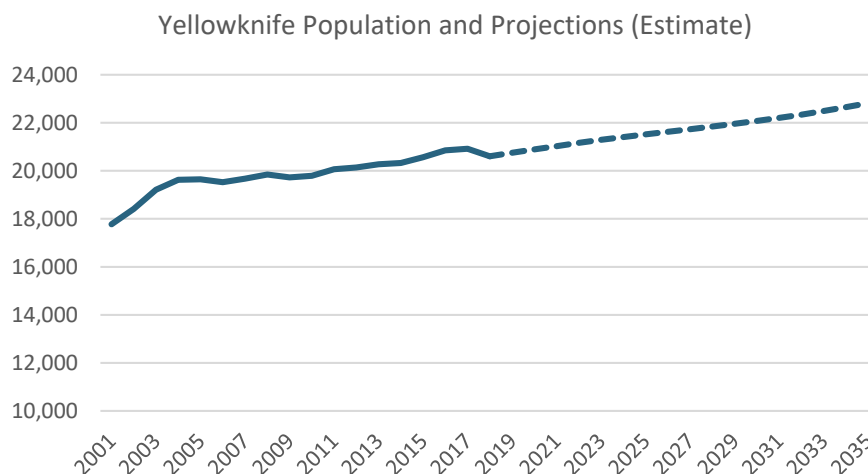


Figure 71: Yellowknife Population Projections 2018-2035

Figure 71 is the culmination of projection modelling undertaken by the NWT Bureau of Statistics whereby the current population of Yellowknife (20,607) is forecast to grow by an additional 2,207 residents over the next 17 years (to 2035) to 22,314. This growth represents a 0.5% to 0.7% annual population increase, well above forecast growth in the Northwest Territories (0.02%), and well below national averages (1.2%).

Past Community Plans incorporated similar population forecasting, with reference to projection modelling used by the NWT Bureau of Statistics. However, these forecasts generally overestimated potential population growth when compared to actual population growth. The conservative forecasting approach used within this Community Plan Update recognizes the unique circumstances of currently declining mining activities and financial limits of the Territorial government. The conservative population forecasting follows trends of marginal increases which have occurred over the past 20 years, and account for already occurring intra-territorial migration to Yellowknife.

7.3 Constraints to Development

The City of Yellowknife recognizes that there are major constraints on land use development, and these limitations have not changed from previous community plans. Limits on land availability, and the escalating financial costs of sprawling growth led to the Smart Growth principles of the 2012 General Plan. Land Tenure in the city has not changed since the 2004 General Plan and previous iterations with sizable portions of the city committed to single long-term uses, including the Yellowknife Seismological Array (1960's), Commissioners and Territorial Lands (1960's) including the Territorial Parks, Airport Lands, and Akaitcho Interim Withdrawn Lands (2006), and other mining activities (Con and Giant Mines – 1930's).

Existing land uses and protections reduce municipally controlled lands from those within the City Boundary (13,660 ha) to 7% of this total area (995 ha), with 1% (118 ha) considered vacant and useable. Further rock outcrop features may reduce this further, while other lands may not be desirable for development due to permafrost, soil stability, and the changing climate.

Current remediation of the Con and Giant Mines may result in lands being brought back into consideration for development and some community uses. While contamination is not likely to result in full use of each property, parks or other low impact and interaction uses may be feasible. This remediation work has only just begun at the Giant Mine, and may be closer to completion in the Con Mine site, however at the time of this report each parcel remains off-limits for municipal purposes.

7.4 Policy Context

For the purpose of this report a variety of community policies have been considered, which date back to the previous community plan and what has been learned over subsequent years. This background report has attempted to encompass a variety of factors and perspectives as part of understanding the City of Yellowknife in 2019, and where it may change by 2035 and beyond. The following is a general list of the existing policies which have been considered as part of this review:

- 2019-2022 City of Yellowknife Strategic Plan
- Grow: Yellowknife Food and Agriculture Strategy (2019)
- Strategic Waste Management Plan (2018)
- City of Yellowknife Trail Enhancement and Connectivity Strategy (2018)
- Creating Vibrancy in Downtown Yellowknife: 50/50 Site and Beyond (2018)
- City of Yellowknife 2017 Citizen Survey
- Everyone is Home: Yellowknife's 10 Year Plan to End Homelessness (2017)
- City of Yellowknife Corporate and Community Energy Action Plan 2015-2025
- City of Yellowknife Transportation Improvement Study (2010)

7.5 City Council Strategic Goals 2019-2022

Vision

Yellowknife is a welcoming, inclusive, and prosperous community with a strong sense of pride in our unique history, culture, and natural beauty.

Goal: Growing and diversifying our economy

1. Foster a robust and diversified tourism sector
2. Maximize benefits from an expanded post-secondary institution
3. Refresh and implement a Yellowknife economic development strategy

Goal: Delivering efficient and accountable government

1. Enhance long-term financial and asset management planning
2. Integrate a culture of continuous improvement into corporate culture
3. Confirm clear service level standards for key City programs and services

Goal: Ensuring a high quality of life for all, including future generations

1. Prioritize adaption to, and mitigation of, climate change
2. Redefine public transit
3. Work with partners to address pressing social issues
4. Develop a City of Yellowknife Arts and Culture Master Plan

Goal: Driving strategic land development and growth opportunities

1. Diversify development options
2. Promote development across the City

7.6 Consultation Input and Findings

Public consultation was and will continue to form a primary component of the 2019 Community Plan, with this work originally noting that a community plan is written by residents through their direct feedback with the consultant team and municipal staff.

Consultation has occurred in a variety of venues and times throughout the review period, starting with the Festival on Franklin in 2018, attendance at the 2018 Farmers Market, within World Town Planning Day (Nov. 2018), Centre Square Mall (Dec. 2018), Community Planning Week (Feb. 2019), and Planning Forum Events (Mar. 2019). Throughout this process PlaceSpeak online forums have also been open to public comment and administration was encouraged to share input from residents and their own experiences with the review team. The results of this community input have been summarized within **Appendix B**, as part of the **Community Plan Consultation Summary**. In general, responses have been varied and frequently contradictory, as can be expected with difficult land use issues which affect all residents in different ways. While ideas and thoughts have been included within the Community Plan Update, review staff have had to rely more on statistical data to ensure that land use decisions are made in the best interests of all residents.

Moving forward, additional consultation will occur as part of draft community plan review, seeking to ensure that the long-term policy document is appropriate and considerate of the many residents within the City. While it is unlikely that consensus will be reached on all decisions, it is believed that in working together and incorporating statistical data and best practices from other jurisdictions, a positive community plan can be realized for most residents and land use needs.

7.7 Best Practices

In order to ensure that Yellowknife's Community Plan is forward-looking, a number of relevant current city-planning trends were reviewed to identify practical approaches that have been applied by other northern cities. The best practices and innovative approaches identified below can be further explored through engagement with the residents of Yellowknife to determine how to incorporate suitable policies into the Community Plan.

7.7.1 Helsinki, Finland

In 2018, Helsinki was ranked 5th on a list of Top 50 Smart City Governments, the highest ranking achieved by any other northern city on the list, and the City also took first place in the European Commission's 2019 Smart Tourism Competition.

- **Innovation** – Helsinki has developed a city district for the purpose of experimental implementation of smart city infrastructure and services, named Smart Kalasatama. The district is intended to accelerate the development of smart city technology by providing an opportunity for it's the collaborative creation of new technology through the involvement of both residents

of Kalasatama as well as those looking to develop or provide the services. To assist in the development of real life pilot projects, the City also provides some funding.

- **Net-Zero Buildings** – In order to meet the City’s goal of becoming carbon neutral in 2035, beginning in 2021, Helsinki will aim for all new buildings to meet nearly zero-energy standards, indicating that they will require very little energy. Currently, building regulations require that an energy-efficiency survey is conducted in the design and permitting phase for new buildings. The survey assesses the efficiency of the building based on its energy consumption and the energy source. The City prescribes maximum energy usage permitted based on building type and in order to obtain a building permit the proposed building must meet minimum efficiency standards. To meet the City’s goal, it will also need to significantly increase its production of renewable energy.
- **Smart Tourism** – Helsinki leads the way in smart tourism with its advanced digital city guides, open data, environmentally friendly accommodations and attractions, and high quality and accessible public transportation. The City also has a road map for tourism that ensures that visitors are directed to different parts of the City to support a variety of local businesses to avoid disproportionate tourism activity.

7.7.2 Stockholm, Sweden

The City of Stockholm leads the way on a number of modern planning matters. For instance, in recent years it has revisited its accessory housing provisions in response to a growing undersupply of housing and increasing interest in small homes, while also remaining a frontrunner on action against climate change and the incorporation of smart city technology.

- **Tiny Homes** - As a response to the increasing demand for housing, stringent building codes have been relaxed to give rise to the *Attefallshus* – an accessory dwelling that can be erected on a property that contains a 1 or 2-unit dwelling. These units do not need to abide by zoning regulations, but must: comply with building codes, not exceed 25 square metres, not exceed 4 metres in height, and cannot be closer than 4.5 metres to a neighbouring lot line without permission. The City has a history of permitting small accessory dwellings with the *Friggebod* structures being permitted since 1979; originally at 10 square metres, and expanding to 15 square metres in 2008. Both an *Attefallshus* and a *Friggebod* are permitted on the same property.
- **Shared Housing** - The growth of the sharing economy has impacted how developers have reacted to the housing shortage in the City as well. A Stockholm-based developer launched a small dormitory-style housing complex that provides housing for 50 people in 1,100 square metres of space.
- **Climate Change + Smart City** - The City has committed to becoming fossil fuel free by 2040 and as part of the efforts to meet its ambitious target it has taken a progressive approach to energy usage, which includes significant effort to introduce smart city technologies, including: developing the world’s largest open fiber network; turning waste/recycling into electricity, heat and biogas for vehicles; providing waste collection statistics for individual households and

businesses; utilizing waste heat from supermarkets; using municipal lampposts as base for sensors, wifi, and the mobile network; using solar powered trash bins; the "make a suggestion" phone application to receive requests from residents; and the installation of motion sensing LED street lamps.

- **Sustainable Mobility** - Stockholm is also increasing the sustainability of movement through the City, which includes: the use of smart traffic signals that prioritize the movement of goods and passenger vehicles; the micro-distribution of freight using bicycles; alternative fuel provision for vehicles; and the development of a vehicle sharing pool that includes electric cars, electric bicycles, and cargo bicycles.

7.7.3 Anchorage, Alaska

The Municipality of Anchorage is going through a process of revitalization as low oil prices require the City to strengthen its capacity for economic growth. The Municipality is focusing on the region's unique amenities and improving the quality of life in order to attract and retain skilled residents and stimulate growth.

- **Transit Oriented Development** – Many cities plan transit oriented development around commuter rail, however without sufficient density for rail service, the transit oriented development is focused along bus corridors. Increasing development along transit corridors will allow the municipality to provide increased bus service to support increased expenditure into public transit and enhance mobility in the City. The City will also shift focus from suburban housing to urban housing in order to provide more opportunity to encourage multi-modal transportation.

7.7.4 Reykjavik, Iceland

Reykjavik aims to be the world's first carbon neutral city by densifying urban areas, changing travel habits and reducing non-renewable energy consumption.

- **Sustainable Land Use Patterns** – In order to increase the city's urban density and support more sustainable land development patterns, 90% of new residential units will be located within the existing urban area. Densification will be pursued strategically to ensure that over 90% of residents will also be within 300 metres of green space. Additionally, large land reclamation projects intended for future development have been cancelled in favour of brownfield development. To encourage more sustainable transportation methods, the pedestrian and cycling transportation system will be expanded, public transportation will be improved, parking policies will aim to reduce travel distances, and traffic corridors will be redesigned as urban streets.
- **Homelessness** – City Council recently approved the city-led development of 25 small homes for homeless people in Reykjavik. The units will be spread throughout the city and are intended to house the increasing population of homeless people by providing housing with a subsidized rental fee. In addition to the development of small houses, the City is also considering the purchase of additional guesthouses and apartments in order to meet needs.

- **Smart City** – Reykjavik has pursued several smart city projects that combine data from databases related to city infrastructure in order to improve services and operations, increase environmental awareness and improve energy efficiency. Projects include: an online municipal GIS-system; the use of a district geothermal heating utility; and *Better Reykjavík*, an online consultation forum regarding city services and operations.

8.0 Land Supply and Demand

The background review process and need for summarization of current municipal characteristics within this report are to directly support the tabulation of land supply and demand. This background report then builds from the findings and circumstances of past reports completed in 2004 and 2011, demonstrating continued improvement in land forecasting. Analysis of land supply and demand are summarized in the following categories, with a summary of land demand at the end of **Section 8**.

8.1 Municipal Boundary

Long-term planning is based upon assumptions of land supply and demand, with economic activities, population changes, and infrastructure impacting a supply of developable land. Within the City boundaries this supply of land is finite, while additional characteristics may exclude uses and activities from particular areas.

The 2019 Community Plan – Background Report reviewed land supply and demand with assumptions which followed current trends and past Community Plan (General Plan) reports, seeking to determine if current needs and projections can be accommodated within the municipal boundary.

At the time of the preparation of this report the City of Yellowknife Council had passed a motion for a municipal boundary adjustment between the City of Yellowknife and Dettah/Ndilo. The City and YKDFN worked cooperatively on the boundary adjustment and the proposed adjustment has been endorsed by the City of Yellowknife Council and YKDFN Council. The proposed boundary adjustment, if approved by the Government of the Northwest Territories, would expand the City's southwest boundary and transfer land on the eastern boundary, including Ndilo, to the YKDFN. The purpose of the proposed boundary adjustment is to accommodate the long-term growth of the City and the YKDFN.

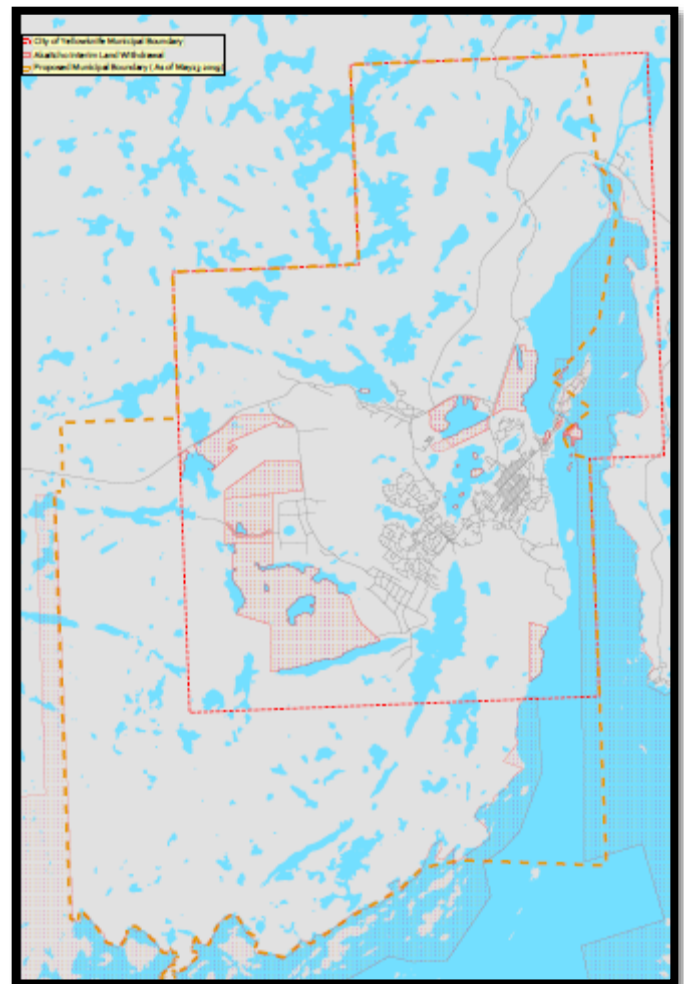


Figure 72: Requested Boundary Adjustment

8.2 Existing Land Disposition, Allocation and Potential Availability

This planning work reviewed past reports and existing spatial databases to determine the current disposition and development potential of lands within the existing boundary.

The existing municipal boundary encloses an area of 13,660 hectares (136.6km²). Of this area, 10,514 hectares (105.14km²) is land, with the remaining area (3096 ha/30.96km²) being water features. **Table 8** below summarizes the land total, availability and tenure values. Lands that are defined as not available, are due to existing land rights (mining leases, Akaitcho Interim Land Withdrawal, Airport, Federal, Other Government, Privately Owned and Territorial Park Land Uses).

Table 9: Land Disposition, Allocation and Potential Availability

	Land Area (ha)	Land Area (%)
Total Land in Municipal Boundary (77% excluding water)	10,514	100
Lands Not Available	6,217	59
Developed Lands	877	8.3
Potentially Available Land (for modelling purposes)	4,295	41
Non-Tenured Lands	4,178	40
Municipal Lands	117	1

Of the 10,514 ha of land identified within the City boundary, 6,217 (59%) is considered as currently allocated with existing rights holders or uses limiting further development. The resulting 4,295 ha (41%) includes non-tenured lands (unsurveyed and surveyed without a current lease holder Commissioners' Lands) and municipal lands, which may be developable; however, some have factors and informal uses may limit the development of these Potentially Available Lands.

In past Community Plans it was assumed that, due limited knowledge of lands outside of the existing built-up boundary of the City, including geotechnical, engineering, environmental, and archeological unknowns, that approximately 30% of lands may be assumed to be unavailable. This represents 1519.2 ha (15.192km²) which is assumed to be undevelopable, and leaving 3544.8ha (35.448km²) of lands for demand modelling purposes. Further analysis of the realistic potential use of such an area will be considered in a later section, given existing servicing and development financial constraints noted by the City.

8.3 Residential

The demand for residential land in Yellowknife is determined primarily by household demographic interests (number of household residents, area needs), and secondarily by population changes. This has particularly become an issue in recent years with slowing population growth, however continuing demand for housing. Presented below is a summary of available land supply and scenarios considered for future residential demands in the City.

8.3.1 Current Situation

Yellowknife experienced a residential development boom over the period of 2015-2016 as a number of new lots were released to the industry, with housing starts climbing from 78 in 2014, to 126 by 2016. In 2017 and 2018, these starts have dropped to less than 65. This growth was primarily in single-detached and multi-unit structures in the Niven Lake and Twin Pine areas. The decline in housing starts is partially due to limited land availability within the municipal boundary primarily for single-detached residential structures. These housing types make up the majority of current inventory, while having the lowest available development land area. High density, multi-unit construction has remained generally consistent over past years, and currently has a greater inventory of available development land, particularly in the downtown area.

Forecast population change in the City, as detailed in **Section 7.2**, is expected to remain constant with average increases of 0.5% to 0.7%, primarily driven by in-migration from rural communities within the territory. By the year 2035 the City of Yellowknife is expected to accommodate an additional 2,207 residents. This represents a total increase of 9.67% over the next 17 years, and based upon current residential densities of 2.7 people per household would require the construction of an additional 817 residential units, an increase of 8.73%. With current annual residential starts averaging 65 units, projected population increases can be accommodated within current construction rates. An additional factor currently affecting the residential market is the decline in the number of residents per household, with a greater number of single occupant households. With resident densities expected to follow local and national trends and decline to 2.6 people per household over the forecast period, a total of 848 units (31 additional units) may be needed. This number of units could also be accommodated within current construction rates.

Table 10 outlines residential construction starts since the previous Community Plan (2012) while noting additional details on the project status, area, available lots and development density.

Table 10: Recent and Proposed Residential Development in Yellowknife (2012-2019)

Development	Status	Area (ha)	No. of Units	Available Lots	Density (units/ha)
Proposed Development identified in the 2012 General Plan					
Niven Phase VII	Partially Constructed	4.3	80	5	18.6
Niven Phase V (Nova)	Constructed	3.0	93	3 (1.29ha)	31.3
Mission Ventures	Constructed	1.5	81	0	54
Bartam – Arnica Inn	Constructed - Unoccupied	0.08	18	0	22.5
Con/Rycon Trailer Park	Constructed	2.2	30	0	13.6
Lot 5, Block 501	Partially Constructed	10.2	120	42	11.8
Hordal and Bagon	Constructed	1.9	32	10	15.8
Additional Development Lands					
Block 203/9 (School Draw)	Vacant	0.26		unknown	15+
Matonobee (4903)	Vacant	0.08		1	12.5
Development Since 2012 General Plan					
Twin Pine Hill	Constructed	2.8	126	0	45
Cavo (Summit)	Constructed	0.6	21	0	35
Redcliff Development	Constructed	0.75	41	0	55
Grace Lake North	Constructed	9.9	30	0	3.03
Grace Lake South Waterside Residential Subdivision	Partially Constructed	3.8	27	17	7.1
Total		41.37	699+	78+	24.3

There have been significant residential developments in the City since 2012, with a high number of construction starts in 2015/2016. There remain a number of large parcels for sale that could support multi-unit residential development in the Downtown and some single detached development throughout the City.

- Preference is for development to occur on existing water and sewer services.
- Total infill area may be 23.37 ha, with some currently serving as greenspace, where redevelopment may be feasible and serve the interests of the City.
- **Appendix B** includes an image of residential infill opportunities identified for consideration.

Table 11: New Home Construction since 2012

	2012	2013	2014	2015	2016	2017
Single-detached	12	36	40	42	59	19
Multi-units	135	127	38	63	67	46
Total Starts	147	163	78	105	126	65

Yellowknife Housing Starts have varied considerably over the past decade with lows of 12 in 2008 to highs of 163 in 2013. Recent years have experienced higher than previous development of single-detached construction. However, multi-unit construction continues to dominate the new construction market. Land availability is often cited as the primary determinant of new home construction, but sales declines in multi-unit structures and a declining economy may begin to have a greater influence on housing starts.

8.3.2 Residential Density

The density controls placed on development will impact residential development within the City significantly. The 2011 Community Plan identified the need for consideration of Smart Growth, and higher density developments, making use of existing infrastructure while creating a compact built area. The circumstances which led to the direction by the 2011 Community Plan, remain true in Yellowknife today.

Residential density remains high amongst new residential construction since 2012, averaging 24.3 units per hectare. For the period of 2003 through 2010, new residential construction density averaged 22.1 units per hectare. A greater emphasis was placed at that time on infill and an intensification of development (seeking 25% of new construction in downtown, 17% on Old Airport Road, and 4% in Old Town).

Some development followed this pattern (Twin Pine Hill, Hordal Bagon), however the completion of Niven Phase V and VII, Block 501 and Grace Lake North and South, which combined serve as the largest residential developments in the City over the previous decade did not follow the intentions of the previous infill policies. These areas are greenfield developments which primarily have resulted in an extension of services or a change in land use designation.

8.3.3 Demand

Population change and projections have been detailed in past sections (7.1 and 7.2), with a generally conservative estimate of annual growth averaging 0.5% to 0.7%, and with a total number of net new residents of 2,207 by 2035. The following conclusions from the analysis are:

- Over the next 5 years (2018-2023), the population will increase by 3.3% (681 new residents);
 - Over the next 10 years (2018-2028), the population will increase by 6.0% (1,237 new residents);
- and

- Over the next 17 years (2018-2035), the population will increase by 10.71% (2,207 new residents).

Although population increases are projected for the City of Yellowknife, the overall population projections for the Northwest Territories are not increasing. The decline of populations in the regional centres and small communities and projected increase in Yellowknife's population is reinforced through an understanding that most of the City's growth will be attributed to migration from other regions of the territory.

Given the above population change, land area demand can be estimated based on existing densities (24.3 units/ha) and through incorporating the average residents per household unit (2.7 residents/unit):

- Over the next 5 years (2018-2023), the land area needs will be 10.38ha (252 new units);
- Over the next 10 years (2018-2028), the land area needs will be 18.85ha (458 new units); and
- Over the next 17 years (2018-2035), the land area needs will be 33.64ha (817 new units).

More accurate estimates of land demand have been completed through this exercise by using the current mix of residential development (single, row and multi-uses), and the associated land area needs as defined by the zoning bylaw, while recognizing past construction start patterns. The current housing unit mix as observed within the City is 60% single-detached, 10% row/townhouse and 30% multi-unit. Using these proportions and current land area needs defined through the zoning bylaw for single-unit housing (540m²/unit), and the average density for row and multi-unit residential (37.8 units/ha), calculations for the residential land area needs for the future City can be determined. The results provide a more accurate and reflective estimate of future City residential land use:

Table 12: Residential Demand (ha)

	2023	2028	2035
Residential Land Demand Analysis (ha)	10.8	19.7	43.4

The above values have been corrected to recognize the 'net-to-gross' additional land area needs necessary for development outside of the existing land area. Such new 'greenfield' development requires the construction of roads, parks and servicing which typically requires an additional land area of 50% for single-detached, 30% for medium density and 15% for high density residential development.

The residential land demand analysis recognizes the inherent limits of the above estimates based upon the assumptions included within the analysis. Population forecasting, although conservative, may not be realized as has been the case for each of the two past community plans. New construction may follow a different mix of housing types from historical averages, due to changing consumer demand, or introduced land use legislation. Additionally, the zoning bylaw once updated may stipulate a different average housing unit size.

In following the current residential land use trends, it is forecast that an additional 42.23 hectares of residential land will be required by 2035.

8.3.4 Supply

Residential land supply is comprised of developed properties which are partially completed or unoccupied, vacant lands identified within the zoning bylaw as residential and growth management areas near to existing services which may in the future serve a residential purpose.

As detailed in **Table 12** above, a number of developments which have been proposed since 2012 or in recent years remain in development, with **75 residential lots available**, and a number of residentially designated lots remaining for sale and development. Almost all of these existing residential lots are privately held, with no clear timetable available on when they may become available or developed.

Through analysis of the 2018 City Tax Roll data it was determined that there remained 9.996 hectares of vacant lands within the City, which are zoned for a single detached residential use. A further 9.067 hectares of land are appropriately zoned for a higher density residential use. From an infrastructure and municipal services perspective, it is more efficient to develop these lands prior to undertaking additional greenfield development outside of the existing service area of the City. **Figure 8.3.4 (Appendix B)** identifies some vacant parcels that would support residential infill, although not all parcels are appropriate.

Growth management areas of the city, those lands which may not currently be designated within the zoning bylaw as a specific land use, and additional park reserves and remnant parcels may also provide a land supply area for future residential development. As identified in **Section 8.3.1**, a collection of infill parcels represents a residential supply potential of 23.37 hectares. The parcels occur on existing service corridors, are vacant or being used for park and recreational uses and may be repurposed for a residential use. A determination or process for identifying such lands are outside the scope of the Community Plan review, however the City may need to consider infill lands as part of long-term land use planning.

Identified in the table below is the estimated land supply available, which follows past land use trends over the next 17 years of the City. As illustrated by the values, high density designated lands remain available over this time period, while low density lands become exhausted by 2024 and additional lands are needed, represented by negative values [-].

Table 13: Residential Land Demand by Scenarios

	2018	2023	2028	2035
Residential Land Supply				
Analysis – low density (ha)	10.00	1.8	- 4.8 [-7.2]	-16.5 [-24.7]

	2018	2023	2028	2035
Residential Land Supply Analysis – high density (ha)	9.07	6.4	4.3	0.42

In review of the above demand and in recognition of the existing vacant residential land, it is forecast that an additional 24.7 hectares of low density residential land will be required by 2035. The existing supply of high density residential lands can accommodate the City's current high density development needs over the review period.

8.4 Commercial

Calculating commercial land demand and supply remains and has become an even more difficult process than in past Community Plans due to limited information being available. To prepare an understanding of commercial land supply and demand, an assessment of market factors was undertaken in order to assess the current situation and future growth and demand needs of the City.

8.4.1 Business Pattern Analysis

In review of non-residential land uses, business pattern data from Statistics Canada for the City of Yellowknife was considered for the 2011 General Plan. This statistical information was last collected in 2008; however, conditions regarding major employers have not significantly changed over this period. Through consideration with industry experts:

- The largest number of employers remain in the professional, scientific and technical services subsector, although this does not represent the greatest number of employees;
- City of Yellowknife specific Business by Industry and Number of Employees information is no longer collected (as of June 2008), however such reporting is available for the Territory. Data for the Territory (2018) supports past reporting; however, without continued statistical reporting for the City's businesses and employers, such comparisons are not exact. The top number of businesses across the Territory are related to Real Estate, Rental and Leasing, Construction, and Professional, Scientific and Technical Services. These sectors were all noted as being in the top five total employers for the City in 2008; and
- Yellowknife accounts for over 53% of the Territorial labour force activity, and nearly 57% of full time employment. **Table 14** provides labour force occupation numbers for the City of Yellowknife, from the 2016 Census, with additional details on change from the previous census (2011).

Table 14: Labour Force Occupation Values for Yellowknife 2016 and 2011 Census, Statistics Canada

Occupation	Total (persons)	Change from 2011 (%) [2011 Value]
Total Labour Force (population aged 15 years and over)	12,710	-0.4 [12,760]
Business, finance and administration	2,300	-7.8 [2,480]
Sales and service occupations	2,300	4.6 [2,195]
Occupations in education, law, social, and community and government services	2,055	10.0 [1,850]
Management occupations	1,665	-4.8 [1,745]
Trades, transport and equipment operators and related occupations	1,580	-2.5 [1,620]
Natural and applied sciences and related occupations	1,100	-12.3 [1,235]
Health occupations	750	13.3 [650]
Occupations in art, culture, recreation, and sport	380	9.2 [345]
Natural resources, agriculture and related production occupations	295	5.1 [280]
Occupations in manufacturing and utilities	130	0 [130]
Occupations - not applicable	150	-50.0 [225]

- While the census population has declined in recent years, and is forecast to only modestly increase, the labour force and employers are not declining, and instead as illustrated in the number of City Business Licences issued, is actually growing. This is an economy experiencing change.
- Business licences issued by the City of Yellowknife have increased substantially from the completion of the last Community Plan in 2011, 2018. growing from 2158 local businesses to 3712 in

Table 15: Yellowknife Business License Change 2012 to 2018

Yellowknife Business Sectors	2018 Business Totals	Change from 2012- % [New]
Entertainment Services	12	50 [+4]
Hospitality, Food and Beverages	180	53 [+96]
Personal Services	154	56 [+86]
Professional Services	124	29 [+36]
Retail, Sales, Rentals and Services	289	43 [+123]
Trade and Industry	335	40 [+134]
Transportation	87	31 [+27]
General Business Services	657	40 [+263]
Agriculture and Animal Services	18	44 [+8]

8.4.2 Current Situation

8.4.2.1 Retail

- Retail uses remain largely accommodated within two areas of the City, the Downtown and Old Airport Road.
- Total Business Licences issued in the past 6 years has grown by 42%, with growth in all sectors.
- Tourism and business visitation to the Territory have both increased substantially in recent years, with much of this activity focused in Yellowknife (see figures below).
 - Tourism is a major driver for new retail space
 - Expenditures by visitors increased by 87% from 2012-2017.
 - Tourism is sustainable, however is dependent upon international circumstances.

Northwest Territories Visitation Statistics

Annual Visitation 2012-2017 (visitors)						
Northwest Territories Visitation Statistics						
	2012-13	2013-14	2014-15	2015-16	2016-17	% Change
Aurora Viewing	15,700	21,700	16,400	24,300	29,800	23%
Fishing	4,800	5,600	4,300	4,600	4,200	-9%
General Touring	15,200	14,800	14,900	19,000	15,800	-17%
Hunting	500	510	510	510	480	-6%
Outdoor Adventure	3,100	1,900	2,100	2,400	7,400	208%
Visiting Friends & Family	13,800	14,100	17,200	12,200	15,900	30%
Total Leisure Travel	53,100	58,610	55,410	63,010	73,580	17%
Business Travel	24,100	35,300	29,400	30,900	34,900	13%
Total Visitors	77,200	93,910	84,810	93,910	108,480	16%

Northwest Territories Visitation Statistics

Annual Tourism Spending 2012-2017 (millions \$)						
Northwest Territories Visitation Statistics						
	2012-13	2013-14	2014-15	2015-16	2016-17	% Change
Aurora Viewing	15.20	21.00	26.80	39.70	48.70	220%
Fishing	11.60	14.00	9.30	9.70	9.20	-21%
General Touring	12.60	12.60	14.00	19.80	19.30	53%
Hunting	5.80	5.90	7.10	7.20	6.70	16%
Outdoor Adventure	6.00	4.10	6.00	7.00	21.40	257%
Visiting Friends & Family	8.40	8.90	12.00	8.50	11.30	35%

Annual Tourism Spending 2012-2017 (millions \$)

Total Leisure Travel	59.60	66.50	75.20	91.90	116.60	96%
Business Travel	48.10	70.50	71.40	75.20	84.90	77%
Total Visitor Spending (\$)	107.70	137.00	146.60	167.10	201.40	87%

- The number and variety of hospitality, food and beverage services has grown since 2012, primarily in tourism services, and non-liquor restaurants.
- The retail sector internationally is changing with growth and a transition to e-commerce

8.4.2.2**Downtown Retail**

- Industry estimates (Spring 2019) have indicated a very low vacancy rate for retail space in the Downtown, with one large outlier being the Centre Square Mall. This space, due to resident and business fears has a high vacancy rate (>50%).
- Past migration of businesses and retail spending to large format retail locations on Old Airport Road have continued.
- Stores formally in the Downtown have further migrated to Old Airport Road or permanently closed, with this trend stabilizing at the time of this plan.
- Vacant properties, and storefronts are a standard within the Downtown, with existing buildings underutilized and outdated for current market needs.
- Major real estate investment trusts control much of the downtown retail space and their leasing models do not currently meet market needs.

8.4.2.3**Old Airport Road Retail**

- Development along Old Airport Road has stabilized from the past Community Plan, primarily due to limitations in available space.
- Migration of industrial uses to the Engle Business District will create redevelopment opportunities, with large industrial lands becoming available for a variety of commercial uses.
- The vacancy rate is near zero within this area with only one property for sale and a separate site available for lease.
- Existing large format retail locations along Old Airport Road are constrained by space; however, large format retail locations may seek redevelopment locations along Old Airport Road and result in new commercial opportunities being created within their existing properties.
- With low population growth and industry closures (mines) retail and wholesale sales have stayed steady across the Territory in recent years, declining in 2016, however averaging 1.2% growth in sales from 2012 through 2018.
- Demand for retail and commercial lands along Old Airport Road has resulted in record land sale prices in the current period (\$30/sq.ft.)

8.4.2.4

Office Space

- Office space is primarily located within the Downtown with vacancy nearing 10%; however, if the Bellanca Building is removed from this consideration, vacancy rates would be closer to 7% to 8%.
- The Bellanca Building currently sits idle and may be considered for redevelopment, additionally a number of vacant lots, and degraded structures are also located within the Downtown and require redevelopment.
- Relocation of mining corporate head offices out of the City, and changes to federal staffing through devolution have been offset by growth in Territorial Government office space needs.
- The majority of office space in the City is owned and managed by private real estate investment trusts with vacancy rates increasing over past Community Plans. Class A Office/Retail is in high demand, while a mix of Class B and C office spaces are available in the market.
- A number of office spaces currently sit vacant and are listed for leasing, including renovated and updated properties. In spring 2019, over 7 properties ranging in size from 1,500 to 7,500 sq.ft. were available for lease in the Downtown.

8.4.3

Demand

Factors influencing demand for commercial land include:

- The population of Yellowknife is projected to grow at an annual rate averaging 0.5% to 0.7%, with some slowing expected due to mine closures and infrastructure project completions.
- Household Spending is expected to grow at a similar rate to population, with Overall Projected Expenditures (**Appendix C**) influenced by growth in tourism spending and uncommitted government infrastructure spending.
- Demand for office space is currently in decline, with government and professional services related to infrastructure serving as the only business sectors with potential interest in growth.
- Retail space interest is increasing along Old Airport Road and within areas of the Downtown as leasers adjust to changing business needs.
- Some office space (ground floor) may be converted to retail spaces due to demand for such retail locations.
- Current demand averages 4.36 ha per 1000 residents, with this historical average expected to continue
- Sector changes including growth in e-commerce, stagnating population and housing spending changes and the small number of retail businesses in Yellowknife may be countered by a resurgence in small retail, tourism and push by the City of Yellowknife (through WinYourSpace program).

Table 16: Commercial Land Supply

	2023	2028	2035
Commercial Land Demand Analysis (ha)	2.97	5.39	9.62

In following the current land use trends for commercial properties it is forecast that an additional 9.62 hectares of commercial land will be required by 2035.

8.4.4 Supply

Commercial lands within the City are primarily held by private landowners, including large real estate investment trusts (REIT's). Most commercial properties are located within the Downtown and along Old Airport Road.

As previously noted there is limited supply of retail space available in the Downtown or along Old Airport Road with vacancy rates near 0% when excluding the Centre Square Mall. High office vacancy has resulted in conversion of ground floor spaces to retail uses. Small retail formats remain in high demand, and building renovation will be necessary to adapt to current retail needs.

The City of Yellowknife continues to offer the Downtown 50/50 Lots and Bristol Commercial Area for sale (totalling 1.17 ha; 0.81ha at Bristol, 0.223ha at 50/50 and 0.139 ha on lots 8, 9, and 10, Block 31). A total of four (4) private commercial properties were available for sale at the time of this report, generally occurring within the downtown and including outdated structures.

Table 17: Commercial Land Supply Projections

	2018	2023	2028	2035
Commercial Land Supply Analysis (ha)	7.9	4.93	2.51	-1.72 [-2.1]

A variety of vacant commercial properties occur throughout the City, totalling 7.9 hectares of designated land. While only 1.17 hectares of the vacant land can be directly controlled by the City, the remaining lands may become available depending on demand. In following the current commercial land use trends (4.36ha/1000) it is forecast that the existing vacant lands will be exhausted by 2032 with an additional 2.1 hectares of commercial land required by 2035. Should privately held commercial properties not be made available, a greater proportion of the forecast 9.62 ha demand would need to be made available.

8.5 Industrial

Industrial land demand and supply has shifted considerably from previous community plan iterations, with the construction of the Enterprise Development Area and Engle Business District resulting in sizable shifts in land use from Old Airport Road to the Kam Lake and Engle area. Consideration of each of these areas and factors which have led to this land use shift was undertaken in order to assess current circumstances and the potential future needs of the City.

8.5.1 Current Situation

There are four industrial areas within the City; however, there has been a transition of industrial uses along Old Airport Road with movement toward the Engle Business District. Further, the Kam Lake and Enterprise areas have experienced increasing interest in residential and tourism related uses as part of their current mixed-use zoning.

8.5.1.1 Kam Lake

The Kam Lake and adjacent Enterprise Mixed Use Industrial Areas are entirely privately owned and in high demand due to the unique zoning which permits accessory residential and tourism uses. Historical kennel and animal uses have caused noise and health concerns for the accessory residential uses. One parcel is listed for sale by the City in Kam Lake (0.3ha), with private sales reported as strong in this area.

8.5.1.2 Engle Business District

Industrial lands within the Engle Business District Phase 1 had stagnated until 2016, when policies were introduced to incentivize industrial relocation to this area. Phase 1 (36 lots) of Engle sold out in 2016 (11 lots sold in 2016) and council proceeded with the development of Phase 2. Phase 2 commenced in 2017/2018 with 40 lots, of which 17 have sold, 3 are held and 20 (27.17ha) remain available for sale.

8.5.1.3 Airport and Akaitcho Lands

The Yellowknife Airport (YZF) moved to a Revolving Funding model on July 1, 2017, whereby the airport has adopted a business-minded approach with operating and capital expenditures to be funded through airport revenue. A charge on ticket fees was added and the Airport has begun the process of developing a commercial development plan for aviation and non-aviation business opportunities on airport lands. Served by trucked water and sewer, YZF lands are territorial and will not require City planning approvals, however will still form part of the land availability for future development and growth in the City region.

Similarly, the land development interests of the Yellowknives Dene First Nation (YKDFN) may align with municipal industrial and commercial interests, and may form part of the available land area for future development and growth. Through a future Akaitcho Land Claim and Self-Government Agreement, withdrawn Lands may come under the control of the YKDFN, with their own interests directing land use. It has been identified through this community plan review that economic and business interests may be

sought by the YKDFN upon their lands, and the City of Yellowknife will seek to support such self-government land use decisions.

8.5.2 Demand

The factors influencing demand for industrial land include:

- Mining and transportation industries remain key drivers of industrial land development, with an increasing role for remediation and infrastructure business;
- Diamond Mine production and operations are expected to slow and end in the next 10 to 15 years, with limited new exploration and no other mines forecast to come on-line in the region. Closure and remediation of these projects will lead to continued industrial activities;
- Metal mines (gold, zinc, rare earth metals) will begin production over this period, however operate with different processes and values and will not replace the quantity of lost positions in the Diamond industry;
- Other infrastructure projects including new all-season access roads, power dams, and electrical corridors may lead to increased industrial activity within the City of Yellowknife;
- The City's 2009 Development Incentive Program Bylaw and updates to this relocation program in 2016 resulted in strong demand for industrial relocation to the Engle Business District; and
- Industrial land demand is not expected to exceed historical averages of 3 hectares per year.

Future industrial land demand has been estimated based on existing per capita rates of industrial demand at 18.2 hectares per 1000. If past trends continue, an additional 40.2 ha of industrial lands will be needed in the City by 2035.

Table 18: Industrial Land Demand

	2023	2028	2035
Industrial Land Demand Analysis (ha)	12.4	22.5	40.2

8.5.3 Supply

- Engle Business District Phase 2 includes 17 available lots (totalling 27.17ha).
- Kam Lake Parcel for sale by the City (0.3ha).
- Aggregate operations will continue to be needed by the community and locations of suitable resources will remain industrial sites. This includes the South Grace Lake area, and former Highway 4 locations, which also include the Solid Waste Disposal Facility.
- Airport Lands totalling approximately 75 hectares may become available for industrial purposes.
- Airport Lands formerly designated as quarrying mining includes 6 vacant parcels (~5.5ha), and 2 developed properties (1ha) are for sale on Laserich Gate and Archibald Court which may be available for a variety of industrial uses.
- Akaitcho and YKDFN, through Det'on Cho may develop lands in the future in support of City industrial interests.

In following the current industrial land use trends (18.2ha/1000) it is forecast that the existing vacant industrial lands can accommodate demand beyond 2035.

Table 19: Industrial Land Supply

	2018	2023	2028	2035
Industrial Land Supply Analysis (ha)	61.3	48.9	38.8	21.1

8.6 Institutional/Community Use

Institutional Land Demand and Supply Analysis was completed with similar consideration for future needs of the City of Yellowknife. For the purpose of this investigation, institutional uses are defined as generally a public use for education, historical interpretation and information, municipal, territorial and federal services, recreation and shared public space. Current institutional land use averages 6.22 hectares per 1,000. Previous community plans have suggested that 3.5 hectares per 1,000 may serve as an appropriate ratio for this land use.

In completing an assessment of land demand for the future period of this Community Plan review, the existing ratio of 6.22 ha/1,000 was used. Land needs were determined to be the following over the review period of this report, with an additional 13.7 hectares of institutional land required in the City by 2035 with a population increase of 2,207 residents.

Table 20: Institutional Land Supply Projections

	2023	2028	2035
Institutional Land Demand Analysis (ha)	3.5	6.8	13.7

Such assessments of institutional land are not an exact value as many institutional changes and needs over future years may be accommodated within existing institutionally zoned parcels. Expansions of existing facilities, and co-location of services provide cost savings and improvements in service delivery. Few institutionally zoned vacant parcels currently exist within the City, with only 0.46 hectares noted within the tax roll. This report does not suggest that there is a major divide between demand and supply and instead supports the concept that institutional land areas will be provided as part of future development and/or located within existing institutional properties within the city. Such infill development of institutional uses is appropriate and preferred.

For the City of Yellowknife, a number of institutional land use changes are forecast for the future period including the rebuilding of schools (J.H. Sissons), construction of a post-secondary institution (Aurora College/Polytechnic), reconstruction and repurposing of Stanton Hospital, Prince of Wales Historical Centre, an Akaitcho Museum and construction of a new Aquatics Centre and library. All of these land

uses are expected to occur over the review period of this community plan and lands for their construction have been considered within this plan.

8.7 Open Space/Recreation

Open Space and Recreation land areas comprise 23.1% of the total surveyed lands within the City of Yellowknife, and yet many of these parcels would be considered remnant and underused. Many of the parcels occur alongside existing development areas, serving as buffers to roadways, waterways and adjacent uses.

Specific Open Space and Recreation areas include Tommy Forrest Park, Parker Park, Range Lake, Fritz Weil Park, Pilots Monument, Tin Can Hill, Bristol Pit, McMahon-Frame Lake, Niven Lake, Rat Lake, the Ski Club and countless other parcels.

Past community plans have suggested a ratio of 17 hectares per 1,000 would serve this land use demand, however current ratios for the City are averaging 35.1 hectares per 1,000. Maintaining such average ratios may prove challenging for future councils as other land users (Territory, YKDFN) and infill residential development compete for the existing open spaces within the immediate City. The following chart demonstrates the additional open space and recreational land demands (following a ratio of 17ha/1000) for the forecast increasing population over the review period of this Community Plan.

Table 21: Open Space and Recreation Land Demand Supply

	2023	2028	2035
Open Space and Recreation Land Demand Analysis (ha)	11.6	21.0	37.5

A movement of open space and recreation sites to the periphery of the municipal boundary and into the regional area are likely to occur. While recreation lands are available and already being used, consultation with the YKFDN by private organizations, groups and municipal interests will need to occur as many regional lands may overlap within their land claim.

As all existing Open Space lands and many recreational facilities are considered vacant, a supply valuation does not provide a useable figure regarding what may be able to be repurposed or used for the growing City. It is recognized that an evaluation of existing recreation and open spaces will need to occur as the future city changes. Part of Con Mine, if returned to a recreational use through remediation may provide lands for recreation which can be shifted and concentrated from existing neighbourhood parks. Such repurposing may open up additional residential and commercial opportunities on serviced lands, however the role and importance of open space and recreation sites should not be undermined.

Maintaining land area ratios of at least 17 hectares/ 1000 will continue to provide a place for resident recreational pursuits, while natural buffers, lakes and rock outcrops will provide natural reminders and oasis's which will continue to define the City of Yellowknife as a unique and special place.

8.8 Transportation/Infrastructure

Forecasting transportation and infrastructure land use change for the future 17 years (to 2035) is equally important as consideration of the broader land use areas previously discussed. Road and infrastructure corridor expansion has been included within the residential, commercial and institutional review, referred to as a 'net-to-gross' calculation, new greenfield development requires an expansion of roads, sewer and water servicing which may take upwards of 50% of the additional land area for new development (including parks and institutional areas).

Along with greenfield development, existing infill development may require an expansion of pumping stations, the Fiddler's Lake sewage facility, the municipal waste site and sections of the piped systems and roads which service the City. New greenfield development requires additional land areas where this service infrastructure may be located, while even infill development may require an expansion of key infrastructure which will also require additional lands.

The existing road and electricity networks may also serve currently unknown needs in the future, allowing for wood pellet or geothermal district heating systems, or alternative energy and service delivery. Climate change may impact these transportation and infrastructure features, altering conditions and leading to necessary changes in the technology and land area needs of such infrastructure. Climate change policies may already be leading to transportation changes, as increased fuel taxes encourage residents to consider transit and active transportation options in their daily activities. Transportation and supporting infrastructure will need to adjust to accommodate alternative modes of travel, while also continuing to serve existing users and increased precipitation events.

8.9 Land Demand Summary

As detailed in the sections above, using existing proportional rates of land use and moving forward with population forecasting, additional land will be necessary for the future City of Yellowknife, or the existing development patterns will need to change.

New greenfield development, requires additional land in servicing and connecting these new areas of the city, with net-to-gross calculations demonstrating that an additional 25.3 hectares of land would be required for a mix of 60% single-unit residential, and 2.1 hectares of additional land will be needed for commercial uses. Multi-unit residential can be accommodated within the existing built community, with more opportunities for infill, and redevelopment. There remains an existing and appropriate supply of industrial land, with the potential for even greater amounts becoming available for this use through airport development or decision of the YKDFN through the Akaitcho Land Claim.

Table 22: Land Use Supply and Forecasted Demand

Land Use Areas	Current Supply (ha)	Forecast Demand 2035 (ha)
Residential (single-unit)	10.0	26.48
Residential (multi-unit)	9.06	7.51
Commercial	7.9	9.62
Industrial	61.3	40.2
Institutional	0.46	13.7
Open Space and Recreation	-	37.5

Institutional uses, are expected to be accommodated within existing municipal and territorial sites, and while forecasting for this use suggests there will be an unaddressed demand, this is not expected to be an issue for land use planning. Similarly, Open Space and Recreation land uses already form a high percentage of total area, and while these lands are important and new development of such areas should occur, it is expected that the existing areas will remain protected and demand for such land uses can be accommodated within the existing city and any new development plan areas.

While past Community Plans developed land use options that incorporated Smart Growth principles, these planning policies were not always supported by council in land use decisions. Forecast modelling is also not a precise science and there are complex factors that influence population growth and land use. Previous forecasts for population growth and land use projections in former Community Plans have not been completely accurate and have overestimated population growth. However, they were based on the information available at the time and factors like economic conditions can change very quickly, particularly in economies that are dependent on resource commodities like Yellowknife. This Community Plan has once again attempted to estimate the future population of the City, and project the land use needs of the City in 2035. Over this shorter forecast period, consideration has been made for longer-term circumstances, including future uses for Giant and Con Mines; however, it is recognized that in the next update of the Community Plan around 2028, new issues and factors will arise, and the population may be quite different from the currently estimated value. It is only through these incremental adjustments that the City of Yellowknife can continue to provide an accurate and relevant land use-planning document, while ensuring lands are made ready for the future needs of the city.

9.0 Community Plan Review (Strategy)

Identified in the preliminary scoping of the community plan were 19 priority issues related to land use decisions within the City, and which had been noted in past community plans or subsequent to past work. These priority issues and themes were conveyed throughout the public consultation process by residents, city council and administration and were used to frame discussions and seek solutions. These issues have been summarized below, with consideration of how they were reported in the 2011 General Plan, and how the current plan (2019) seeks to resolve these issues in the form of a Strategy.

Priority Issues:

1. Akaitcho Final Agreement:

- ***Toward a Final Agreement (Framework Agreement, Agreement-in-Principle) and self-governance***
- ***Interim Land Withdrawal***

2011 General Plan:

Recognized need for support and continued cooperation and collaboration between YKDFN and the City.

2019 Community Plan Considerations:

- The Akaitcho Process is now nearing resolutions, and local capacity and interest in working with the City has been expressed;
- Open communication and support for the Akaitcho Final agreement should continue to be provided;
- Amendments to the Land Use Concept Maps and Zoning By-law should be made as changes occur, and land use policies should not limit the YKDFN from defining their own intentions and uses for withdrawn lands; and
- Recognize and respect the inherent right of the Indigenous peoples in this region to the land and continue to work with the Yellowknives Dene First Nation through a mutually respectful and beneficial relationship.

2. Affordable Housing

- ***Tiny homes, housing variety***
- ***Housing***
- ***Greenfield and development intensification***
- ***Compatible uses, kennels and residential***

2011 General Plan:

Sought to define affordable housing, set targets for affordable housing as a proportion of construction, encouraging the city to act as a developer through ensuring construction of such units, and following through with the recommendations of the Creating Housing Affordability Report – flexible zoning, density bonusing, alternative development designs and standards and financial incentives.

The 2011 Plan further relied upon Smart Growth policies developed in 2009-2010 to further discussions on development and servicing.

2019 Community Plan Considerations:

- Affordable housing is a key consideration of the current plan, as it relates to generalized discussions on housing, tiny homes and housing variety; all new housing will lead to the need for greenfield development while every effort should be made to maximize existing services and infill locations;
- Incentivize adaptive re-use of land that is no longer viable for its original use;
- Encourage and facilitate more land use flexibility in core areas of City to support revitalization plans and initiatives;
- Prioritize utilization of existing capacity of municipal infrastructure for land use development before adding new capacity;
- Reduce land use conflicts by providing clear policies that limit and mitigate incompatible uses; and
- Develop land in a fiscally responsible and sustainable manner.

3. Changing Economy

- ***Future post-secondary institution***
- ***Agriculture***
- ***Tourism***

2011 General Plan:

The need for remediation of existing mines, and consideration of future alternative uses was considered in the 2011 General Plan, while a future economy was not reviewed.

2019 Community Plan Considerations:

- Recognition that the economy and required land uses of a future city may have a smaller focus around the mining industry and could be a lot more dynamic and varied. Mining may not have the strong presence it has had in the past as current projects show that regional mining is forecasted to decline;
- Tourism, Agriculture and a post-secondary institutional use must be accommodated for within existing plans, and a future updated Zoning By-law; and

- The 2019 Community Plan makes reference to these future land uses and change within the existing mining lands, providing policy support while also recognizing that all land uses may not be able to be accommodated within the future city.

4. *Yellowknife is a special place to live in and visit*

- ***Capital Area***
- ***Strengthening Relationships with the GNWT***
- ***Preservation of areas of community significance***
- ***Heritage***

2011 General Plan:

The 2011 Plan identified that there are unique and special areas to the City, including historical areas, the waterfront and harbour.

Further review of Heritage Resources were identified, with recommendations for strengthening of policies to preserve heritage resources, designate their location, and incentivize the retention and protection of these features.

2019 Community Plan Considerations:

- Protection of existing area development plans within the City, including the Capital Area, and heritage features of Old Town, Giant Mine, and Con Waterfront and Recreational Areas, establishing designations which recognize and maintain the unique attributes of these areas; and
- The updated plan provides support for the need for land use requests to the GNWT as part of an expansion to the municipal boundary, incorporating the Fiddlers Lake Sewage Lagoon, aggregate resources and the water intake within the city's boundary.

5. *Infrastructure*

- ***Transportation***
- ***Trucked and piped service extension***
- ***Public spaces – aquatics centre, library, arts and cultural facilities***
- ***Parks trails and open spaces, passive recreation***
- ***Bristol Pit***

2011 General Plan:

The 2011 Plan seeks to support active transportation, transit, and improvements to existing road networks, the incorporation of Fiddlers Lake within the municipal boundary, and protection of water resources, while recognizing that extending servicing is cost prohibitive.

2019 Community Plan Considerations:

- Establishment of land use designations which protect lands for current and future recreational and infrastructure uses;
- Prioritize utilization of existing capacity of municipal infrastructure for land use development before adding new capacity;
- Recognition that extensive greenfield development is not desirable or fiscally responsible; and
- Develop land in a fiscally responsible and sustainable manner.

6. Mines

- **Remediation Projects**
- **Re-purposing Con and Giant (traditional, recreation, residential, industrial)**

2011 General Plan:

The 2011 Plan encouraged the remediation of sites to an acceptable standard for residential and commercial development, or active and passive recreational spaces.

2019 Community Plan Considerations:

- Remediation has occurred on the Con Mine site, and the active clean-up is done. However, monitoring will be on-going and the release from the lease with the GNWT will not happen for some time. The Mackenzie Valley Land and Water Board will determine when the land is ready to be released after reviewing results of long-term monitoring. The Giant Mine remediation has only just begun and timelines for release of land are undetermined at this point;
- Until such time as soil, water and emission standards are appropriate for an intended use, the City should not consider development or tenure to these properties;
- Partial use of sites, and a reduction in hazard land setback requirements (450 m buffer from Con Mine) should be undertaken as appropriate to allow for redevelopment of neighbouring and unimpacted areas;
- The City should reduce land use conflicts by providing clear policies that limit and mitigate incompatible uses; and
- Incentivize adaptive reuse of land that is no longer viable for its original use.

7. Climate Change2011 General Plan:

Not identified within the previous General Plan.

2019 Community Plan Considerations:

- Climate adaption and mitigation are considered as part of each land use designation;

- Improve resiliency of land development with respect to climate change through a range of measures and standards such as building setbacks to prevent flooding and soil erosion, support for alternative transportation options and allowance for higher land use densities; and
- Improve energy efficiency of land development and associated land use activities that support energy and GHG emissions targets specified in the *City of Yellowknife Corporate and Community Energy Action Plan*.

10.0 Implementation Strategy

In recognition of the inter-relationship of the Community Plan document with a variety of City Departments, policies, outside community organizations, businesses and residents; a framework for the implementation of this document is proposed below. As frequently identified in public comments and consultation, it is important that documents are used, understood and continue to remain relevant through frequent review and amendment. Over the next two (2) years, it is recommended that the following be undertaken.

Recommended Initiatives:

- Zoning By-law Review (comprehensive review and update);
- Communications Plan (Public and Stakeholders);
- Mapping and update of Geographic Information System;
- Akaitcho cooperation and land management partnership (ongoing); and
- Municipal boundary adjustment, and Territorial land transfer.

Zoning By-law Review

As in past Zoning Bylaw reviews processes, the City should undertake a full review of the existing Zoning By-law to address changes, and update the document as part of implementing new direction as provided by the 2019 Community Plan. The following specific considerations should be addressed in the Zoning By-law review to align with the objectives and policies of the Community Plan:

- Review of the building and planning process to ensure consistency and clarity for users;
- Review minimum off-street parking policies and their influence on infill and City Core/Central Residential land use intensification;
- Review of accessibility criteria for site planning;
- Review of landscaping requirements to factor in fire smart planning principles and climate change adaptation;
- Review outdoor lighting requirements and impacts of outdoor lighting on dark sky principles, wildlife, and aurora viewing;
- Consideration of requirements in new residential and commercial developments for electric vehicle charging infrastructure;
- Consideration of inclusionary zoning to increase stock of affordable housing to support the affordable housing goals in *Yellowknife's 10 Year Plan to End Homelessness*; and
- Consideration of increasing flexibility of zoning in some areas to allow for more mixed-use land development.

Communications Plan

The City will prepare a communications plan which shares the completed work with residents and other interested parties, providing a basic overview of the plan, and identifying its relationship to other City policies, including the zoning by-law and development plans. This communication plan should include the Council's commitment to following through with this Community Plan, and provide an overview of the planning and development process, including the roles and responsibilities of all stakeholders. Other information items should include: 1) A land use and tenure overview; 2) Climate change and other environmental considerations; 3) An overview of the public consultation process undertaken; and 4) The development review process. The communications materials should be made accessible through a variety of media tools, including PlaceSpeak, within a dedicated page on the City's website, notification in the capital update, and printed copies at City Hall.

Mapping and Geographic Information System

The City as part of the acceptance and agreement to the Community Plan Update will alter existing mapping to reflect the simplified land use direction of the 2019 Community Plan. This mapping will be shared with the YKDFN, Territorial and Federal Governments, and other interested parties.

Akaiicho Final Agreement and the Municipal Boundary

While still unconfirmed, it is expected that an Agreement-In-Principle between the Akaiicho (including the YKFDN) and the Federal Government will occur in the near future. As this will result in the transfer of lands within the city, and a change in governance of lands regionally surrounding the city, amendments to the community plan may be needed to reflect final municipal boundaries and land use servicing partnerships. The results of these long negotiations will have profound impacts upon the residents and administration of the City of Yellowknife and the people upon whose traditional land the city was formed. While efforts have been made within this plan to include foreseeable policy changes, and municipal boundary adjustments, additional amendments to these items within the Community Plan are expected to be necessary in continuing to ensure relevancy and accuracy of the 2019 Community Plan document.

Community Plan Review

As mandated by the *Community Planning and Development Act*, a comprehensive review and update of the 2019 Community Plan must commence within eight (8) years of its adoption, likely commencing in 2028. The future review should take into account the 2018-2019 work, and include revisions and updates as undertaken by council in the subsequent years. If circumstances change to a degree that policies no longer reflect the City's circumstances, a review process and/or amendments to the 2019 Community Plan should be initiated.

Appendix A

Record of Engagement

Public Engagement Summary – CP Update 2019

A record of the public feedback was prepared after each session. The details of the feedback will be included as an appendix in the Background Report. To help organize the feedback, it has been arranged based on the broad land use categories: residential, commercial, industrial, institutional, recreation (open space) and unavailable land.

The summaries that follow organized feedback by themes that surfaced during the engagement activities. The feedback is presented in a table format to make topics of general agreement, and contradictions apparent:

Comments shown side by side in two columns indicate that contradictory comments about the same topic were made.	In some cases comments are shown side by side where variations on a similar comment were made, that were not contradictory.
Comments in a single row indicate similar discussion at several different sessions, and general agreement.	
In some cases comments made were specific to a stakeholder group, and the name of the group is included in brackets i.e. (developers).	

This summary has been prepared for City Council for consideration.

Key Planning Priorities Identified:

1. Akitcho Interim Land Withdrawl
2. Bristol Pit
3. Capital Area Planning
4. Future Recreation, Culture and Education Facility Locations
5. Giant Mine Remediation
6. Improving existing Parks – Tommy Forrest, Parker, Con Mine
7. Kennels, Animals and Agriculture among Residential
8. Municipal Boundary Review
9. Parks, Trails and Open Space
10. Passive Recreation (off-leash areas)
11. Seeking Land from the GNWT
12. Tiny Homes, Density and Growth
13. Tourism – Yellowknife is a Unique and Special Place
14. Trucked Service and other Municipal Services

Residential Land Use

Dwelling types	
Residential infill and different options for compact development, including areas for tiny homes and seniors residences.	Tiny homes not financially viable or realistic for servicing, land use requirements.
'Tiny Homes' not really an option, but creating smaller spaces within existing structures – a tiny or smaller sq.ft. home is appropriate and needed.	
Encourage affordable housing	Allow for informal housing/living tents and transient uses
Infill only being undertaken with High End Condos, alternative options are available or should be explored to provide affordable housing options. CMHC makes alternatives viable, if parking requirements reduced.	Support for storage in downtown and with condo's may create added demand for higher density, condo living.
Cut regulatory limitations to encourage development which will provide more choice and reduce rental or purchase costs: 1) Reduce minimum lot sizes; 2) Change parking requirements; and 3) Change grading requirements (given local bedrock).	Development must consider the servicing needs of the use, review water, waste requirements, and not cost the city
Different choices needed, leading to reduced rents, affordability, multiple interests and lifestyles being served.	Still remains demand for ownership, smaller lots allow entry into market.
Support neighbourhoods and options which represent Yellowknife, don't create a 'Grande Prairie North'	
Incentives or city support for non-profit management of an affordable housing option – Cooperative Housing, Communal Housing.	
Must create neighbourhoods, not just housing – include parks, commercial...; allow for district heating	
Infill, Alley Way, Air Space Development creates development within existing space.	Interest in large lots and rural development.
Residential with Kennels has been limited <ul style="list-style-type: none"> • "We must accommodate dog kennels", they are part of the northern identity • Engle is a viable location for dog kennels (ie. NWT SPCA); however Fire Marshall limitations and Trotters cannot continue to be moved. 	
Recognize that we are a mining town, and should create options for working class neighbourhoods, not more expensive Niven's	
Location of residential dwellings	
More areas for waterfront residential development	Absolute protection of shoreline, accessibility and the availability of green space
Public infrastructure including trails and bus stops must be installed first, before subdivisions are developed. Bond to connect trails, install bicycle infrastructure parks, prior to residential move-in.	
Subdivisions must pay for their infrastructure costs (servicing costs).	

Infill is the best route for future development, with additional density. Will need to consider storage off-site for vehicles.	City should not be forced to grow upwards, but must continue to protect important cultural and natural features in horizontal growth.
Must understand the values of residents, as decisions on density, land uses are affected by how residents what to live and for their city to function	
Do not like phasing approach, as it results in legal non-conforming uses and conflicts to arise. Cannot force activities out, but should incentivize their movement away from incompatible uses.	
Encourage residential development downtown	Allow for single or low density residential downtown
Cannot use Con and Giant Mine for anything other than mines and parks, to designate as Growth Areas is dangerous and inappropriate	
Homelessness	
Homeless residents need to be located downtown for access to services, concentration allows for better outreach, treatment and if needed policing.	Move the downtown shelter away from the Liquor Store
Grace Lake	
Grace Lake example cannot be repeated.	
Existing neighbourhood expensive.	
Road may end and no further development occur depending upon Akaitcho Land Withdrawl	
No fire or piped service	
Issues bigger than a convenience store being needed, upzone to allow higher density.	Adding more people will affect dog trotters and quarry.
Agriculture Use	
Agriculture should be allowed and encouraged in residential areas	Urban agricultural should occur in commercial and residential areas
Supportive policies for communal gardens or incentives for communal food, fruit gardens	
Need spaces, appropriate designation with water access	
Can be associated with Kennel uses	
Requires access to soil, land, and water for greenhouses. Can work together with dogs and tourism.	
Old Town	
Improvements to sidewalks and parks needed in this area	Old Town should be protected as a heritage location
Should not be a location where all houseboats anchor	

Commercial Land Use

Downtown	
Compact walkable, vibrant downtown	
Revitalize downtown with development and a variety of activities, making it busy after 6pm to make people feel safe	
Still interest in large format spaces reported by Chamber of Commerce. Existing lots available downtown too prescriptive or limited for businesses to use.	Do we need additional commercial lands (big box retail) or other in our City? Bristol Pit is one of the few remaining commercial properties that the City controls.
Incentivize development over forcing it downtown	May seek increased taxing of vacant land – adjusting mill rate based upon use instead of improvements
Incentivize reclamation – former gas station site downtown and vacant buildings	
Incentivize downtown commercial use, removing restrictions on structures and use to allow for a greater variety of development.	
Keep hotels downtown/in town, with tourism programs run more remotely outside of the city boundaries.	
Allow for service uses including gas stations/car washes downtown	
Downtown should include gathering and educational/social/recreational/cultural activities are prominent and mixed with business/retail.	
Parking	
Remove boat parking from the residential streets	
Removing parking requirements (zoning bylaw) would open up serviced, correctly zoned lots within Downtown.	Cannot eliminate parking downtown, it is needed for the local lifestyle.
Should not allow downtown buildings to be converted into parking	Should allow for parking lots to be created, should not restrict land owners rights to income and even a temporary use
Community efforts to counteract driving and parking (as-is), using innovative ideas – “walking bus at Sisson”	
Commercial Activities - Tourism	
Tour operators looking for significant amounts of land in the City to operate businesses.	There are some activities that can fit within the City, and some may not.
Tourism includes Aurora Viewing, but also dog sledding, skiing, interpretive programs, trap lines, cultural experiences – all searching for land which is not available within the City.	Should aurora viewing be within City, likely not enough room to accommodate
Require clear and transparent zoning for dogs, viewing locations	Light pollution is the main concern for aurora tourism
Some tourism may occur along waterfront (aurora pods).	Encourage more tourism/business activities in Kam Lake area, along waterfront for Aurora Viewing
<ul style="list-style-type: none"> Also require activities for during the day, to keep visitors busy and engaged when not staring into the sky. 	

<ul style="list-style-type: none"> • Must create more daytime activities for tourists, with land needed for these programs and activities • Must continually improve experience to ensure repeat visitors and word-of-mouth advertising 	
There needs to be a plan for dealing with tourists, taking pictures of people's homes and using public space, may need to be a limit on the number of tourists, while recognizing that more tourists mean more money is coming into the City.	Must look at how to accommodate more people, wider sidewalks, parking areas for tourism buses.
Current aurora viewing tours are dangerous, with a lack of facilities, limited regulations and an uncoordinated transportation system.	Development of a tourism designated land use, but unsure of what this would be used for and what it may restrict.
Require property that can have structures, separate from residential properties, potentially near Grace Lake and Kam Lake	
Providing more work camp spaces, may alleviate room crunches during ice road/construction hauling periods when tourism is also in its peak	
Other Commercial	
Mixed use commercial area may be viable behind Old Airport Road, extending from Borden Road	
Allow creativity in commercial areas (ie. residential above a car dealership or big box commercial)	
Seems like a significant area of commercial lands occur within the City already (downtown/Old Airport Road)	
City has no other land to offer	Could increase tax on vacant land to stimulate use
Should commercial operations occur on public lands? In short, they already are occurring throughout the City	
Service extension along Old Airport Road to the Airport may support increased density of commercial uses along this route.	

Industrial Land Use

Future competition from 'For-profit' Airport Authority for industrial business lands, with requirements for servicing.
<ul style="list-style-type: none"> • Resources are important, finite materials, require a buffer (500m) for noise, vibration and dust, vehicle movement. (ACE Quarry) • Can work with dog sled (already work to avoid road conflicts) and other tourism operations. (ACE Quarry) • Very interested in expansion south and west of existing pit. Quarries near landfill also seek to continue operations eastward. (ACE Quarry)
Grace Lake will impact upon the existing industrial/commercial/tourism uses, may not be in City's interest to continue its growth and development.
Light Industrial Zoning is important for new business development.
Subdivision of larger industrial properties should be allowed to support new start-up businesses.
Industrial businesses may relocate to Engle Business District, while some commercial are moving in (car dealership). Changing nature of this area and potential development to the east (borden extension) must be considered.

Kam Lake	
Should be more flexibility in Kam Lake to expand the types of uses that are there.	
Light industrial/commercial lands are very much needed in Enterprise Drive area of Kam Lake.	
Need to recognize that Kam Lake is a mixed industrial, commercial and residential area.	Industrial lands in Kam Lake should be protected and not limited by commercial and residential uses.
	Residential and industrial mixed usage in Kam Lake. Should be only one or the other
Kam Lake - Servicing Industrial Land	
Interest in surface water lines in Kam Lake area.	
Catchment systems could be used to retain and use local flowing water (ie. Boreal Gardens/Arctic Farmer).	
Greenhouse development in Kam Lake will require pipes services to make viable – trucked services to unreliable and costly.	
Increased residential density may allow for servicing, and support improved transit.	
Kam Lake – Dog kennels and mushing	
Quality of life an issue within this area. Conflicting uses are recognized to be occurring (Kennels, Industry, Residential) – Kennels require access to trails, and proximity to housing for care and feeding.	
Move dog kennels to a less residential area (Engle). Utilize Kam Lake as a take-off point for dog mushing, but do not keep them there.	Dog Mushing is a business, it exists and is a unique part of the community.
Engle is a viable location for dog kennels (ie. NWT SPCA); however Fire Marshall limitations and Trotters cannot continue to be moved.	“We must accommodate dog kennels”, they are part of the northern identity.
Identifying locations of future residential may avoid future conflicts with kennels.	
Concerns regarding environmental impact, noise, odour of kennels in their current location and water quality of Kam Lake and surrounding business.	
No new kennels should be allowed	

Institutional Land Use

Library	
Should be Downtown, consider 50/50 lot	Should be located next to fieldhouse, away from downtown
Information and Tourism Centre	
This is very much needed, and should be a priority for the City and GNWT	Should consider alternative locations, including Bristol Pit
New Aquatics Centre	
We do not NEED a new aquatics centre, and certainly cannot afford what is being proposed.	Should be consolidated with the fieldhouse and arena
Expanded Aurora College Campus/University	
Integrate plans for a university, which take advantage of the 50/50 Lot	

Recreation/Open Space Land Use

Public outdoor spaces	
Capital area is a positive good, natural space which should not be paved.	Capital Area – Territorial Government will not support development near to legislature
Special areas of our City, however not all are equal. Some land could be converted to residential to allow for investment in existing or needed facilities. Policies needed to redistribute open spaces into residential.	Protect greenspaces of Frame Lake. Neighbourhood parks are important and variety is needed in our parklands
Tin Can Hill must be protected, and historically Twin Pine Hill was allowed to be developed with the understanding that Tin Can would be protected.	Protect greenspaces including Frame Lake, Jackfish and Tin Can. Some residential development may be permitted around Tin Can Hill – to serve infill needs
Multi-use trails are improperly defined but should only be present on Frame Lake and Niven.	Continuity in trails needed – with significant gaps including Kam Lake at hill.
Increase public access to the waterfront	Create a waterfront park in Old Town
Outdoor public spaces should be supported by more amenities, including public washrooms, splash pad, bike storage	Growing our park system is also important, however maintenance of existing features cannot be forgotten
Keep Joliffe Island as a public space.	Joliffe Island is currently considered an Akaitcho Withdrawl parcel – and the property of YKDFN
Allow for informal public uses	
Public Outdoor Spaces – Bristol Pit	
Commercial Site which is used as open space, public park. Park should be formalized, but may not need to be owned by City, with transfer of responsibility and costs to users. CANNOT BE A SINGLE USE FACILITY.	
One of the few remaining City controlled commercial lots remaining, however this is beside the pit and this zoning is not likely a proper designation.	
Conflicting users include the neighbouring cemetery, snowmobile trails, biking, walking, off-leash dog users.	Valuable recreational area for youth opportunities and improved quality of life.
Require operator agreements for this Public Space.	
Create year-round multiple uses for this site.	Site could be a better use of land for the Folk on the Rocks with a natural amphitheatre.
Access to Water	
Make proper use of public lands along water, install trails and allow the public to access waterfront on public lands – push back against squatting private users	
Boat Launches at Yellowknife River, and Old Town do not service yacht club needs	Niven Cavo location with work proposed in 2019/2020 may be an option
Focus on public space (launch) then allow for private interests and a fishery	

Through Akaitcho Land Withdrawal waterfront lands within the City may be excluded from development.	
Consider the services needed by water uses, allow for refueling at Government Dock/Old Town	
Access to Water– Giant Mine	
Giant Mine closure to public may be an alternative at Con Mine waterfront	
Important to protect waterfront	
Sailing club may not continue to function with closure of Giant Mine Boat Launch	
Boat launch and marina requires a shallow entry point, with 80-100 slips, and parking for trailers, and boat cribs for winter storage	
Great Slave Sail Club (GSSC) has been in its current location since the 1970's, but may have to move by 2023.	
<ul style="list-style-type: none"> • Question the need for this movement, and request for pushback against such a disruptive and long closure of community space • Limited communication from Giant Mine Remediation Partnership • GSSC does not have funding to purchase or construct its own new marina 	
Push for remediation to occur for 1 year only	Push back greater on Giant Mine Rehabilitation/Federal organization closure
Access to Water– Con Mine	
Con Mine Waterfront is not ideal for boat access (steep location, limited parking and storage with more difficult access through City).	May be a viable location for improved recreational boat access.
Existing commercial fishery in area	
Boating access should be a priority, although recognize this may be an opportunity for business and community growth	
Must accommodate parking, storage which is a significant cost and area, may not be available at Con Waterfront site.	
Con Mine may meet needs, but would require major investment.	Historical report (Waterfront Plan, before the Harbour Plan) identified that Giant Mine location was the only viable site.
Require a tenured dock and marina	
Infrastructure – Community Facilities	
Inadequate number of facility spaces for the variety of programming being sought. Many organizations need flexible, available spaces – frequently after school – 3:30pm to 9pm. Existing facilities overbooked seasonally (March Break, Christmas, and summer).	The City has a great variety of spaces, which can service organizations and individual needs, however these are not coordinated (churches, school gyms, fitness centres, public halls, fields, parks).
Infrastructure decisions have long-term operational costs, which must be incorporated within planning – developing a Full Cost Picture.	“Cannot afford the things we want”, and have to be realistic about the things we need.
Identify a new location for a library and a cultural centre	Do not build facilities that are single use (examples field house, hockey rinks)
Allow for year-round use of Folk on the Rocks site – RV Camping	

Should allow for private competition in servicing (trucked water and sewer) areas of the city	
Create an enclosed dog park for small dogs	
Trails	
Not all trails need to be paved or maintained	Frame, Range and Niven Lake Trails should be maintained to a higher standard
Trails connections between subdivisions	Trails connecting the community via alternative transportation routes is important
Include bike lanes on streets	
Integrate trails	
Understand the way residents use land informally and support these trail and park uses	
Must connect Kam Lake and Deh Cho bike trail with the Finlayson area	
Expand trail system from Finlayson Drive and Parker Park to the Deh Cho Blvd extension.	

Indigenous Land Use Considerations

May be lands withdrawn from the community boundary, and an expansion of the boundaries elsewhere
Indigenous connections within city about more than YKDFN, and providing access to the land is important for all of these residents
Reconciliation is about more than providing land and self-government, continuing discussion
Arctic Indigenous Wellness Foundation
Arctic Indigenous Wellness Centre is part of the healing process, prioritizing healing and access to land
Need appropriate zoning and recognition
Conflicting with aquatic/institutional use on Kam Lake, too active and open to city. Appreciate connections, trails interested residents, but do not need dog walkers, nosey individuals
Need a designated location within City
May also seek a downtown location to involve homeless other mental health issues, which see current site as too far away

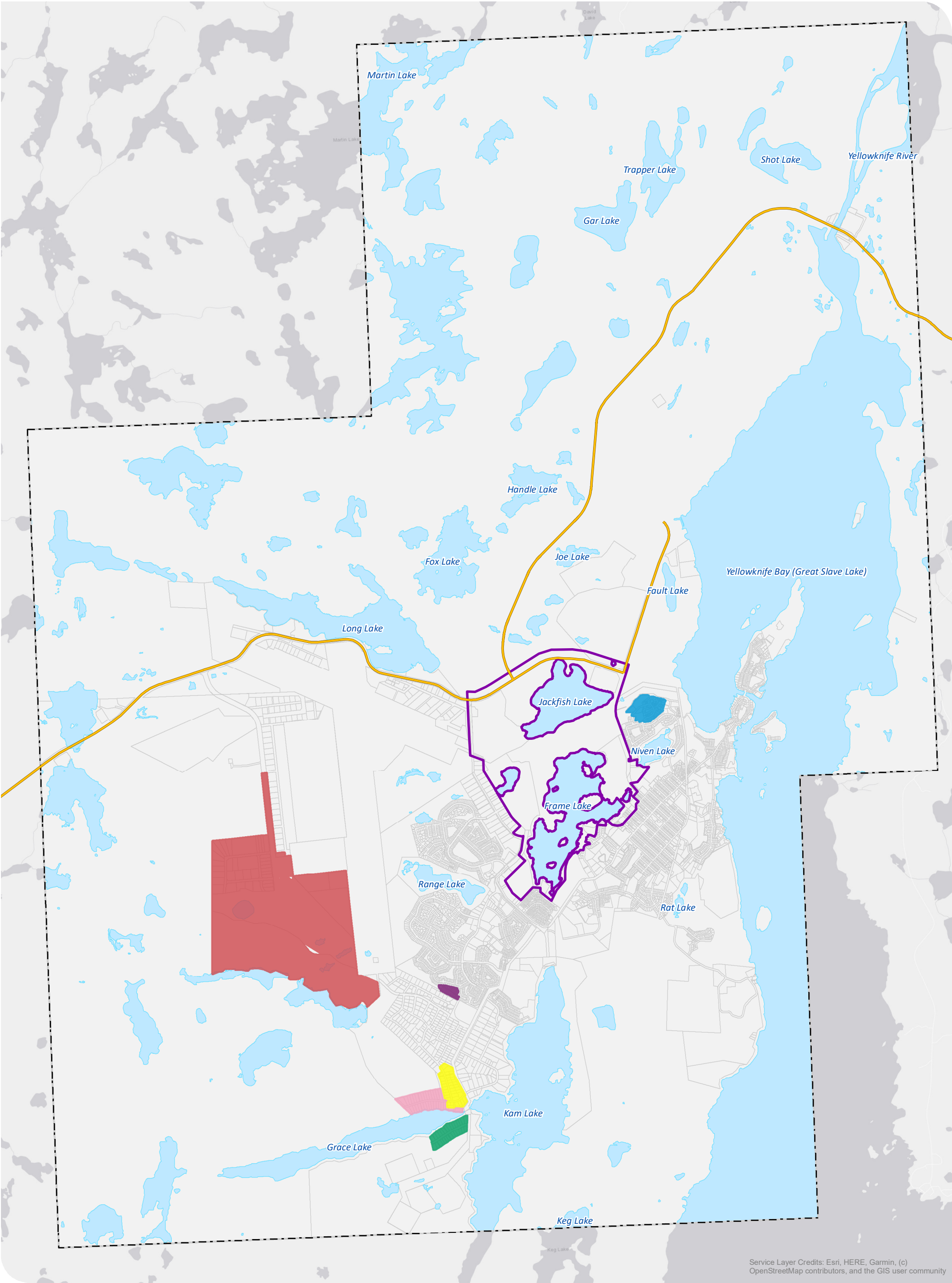
Sustainable Land Use

High energy standards, considering climate change, and following the IPCC recommendations toward reducing greenhouse gas production and building upon Smart Growth ideals.
Consider visionary zoning and what we want our City to look like with regard to carbon in 50 years
District Heating options are available and can be supported through policies. Private industry interested in moving forward with this service. However, what are the implications of private services under public lands/road?
Increased transit and density efforts needed
Lens based upon Carbon impacts of all development
Identifying projects and support for development within budget cycles that have climate positive impacts. Prioritize Climate positive projects, and have a statement of climate principles/priorities within the Community Plan.
Growth will occur, but will need to be directed to height and density due to limitations in area and funds to pay for spread out servicing.

Have regard for the minerals in all materials moved around properties, by requiring site grading, the City may be creating arsenic contamination problems everywhere
For based zoning or inclusive zoning should be considered to allow for more uses in limited spaces.
Remove site area requirements in all zones but downtown

Appendix B

Maps



CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

**EXISTING DEVELOPMENT
PLAN AREAS**

FIGURE 5.2



Development Plan Areas

- | | | |
|--|---|--|
|  Engle Business District |  Hordal Bagon |  Municipal Boundary |
|  Enterprise Drive Extension |  Niven Lake |  Lake |
|  Grace Lake North |  Capital Area Boundary |  Parcel Fabric |
|  Grace Lake South |  Highway | |



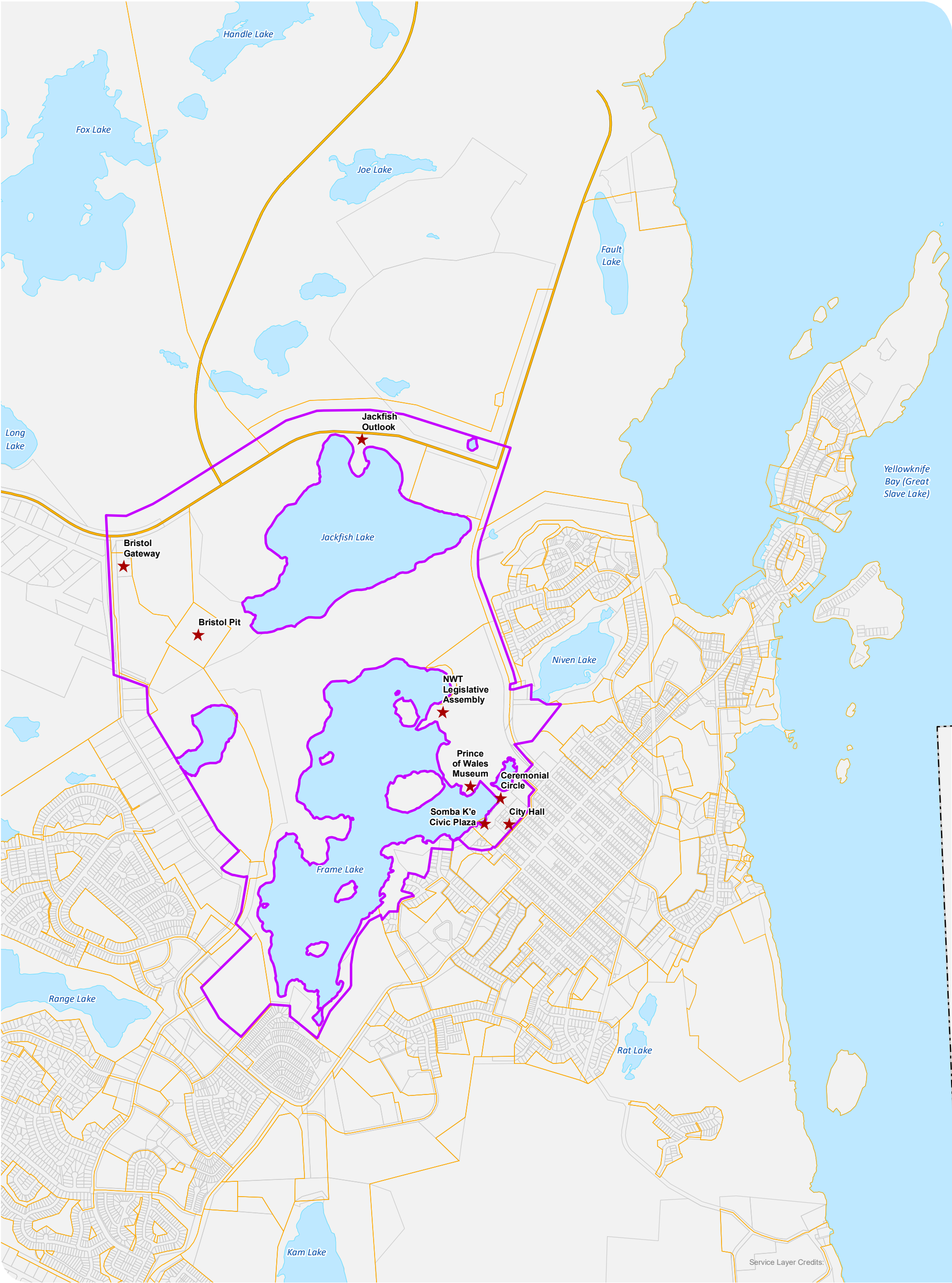
MAP DRAWING INFORMATION:
DATA PROVIDED BY CITY OF YELLOWKNIFE

MAP CREATED BY: LK
MAP CHECKED BY: MK
MAP PROJECTION: NAD 1983 UTM Zone 11N

SCALE 1:45,000
0 250 500 1,000 m



PROJECT: 18-7267 STATUS: DRAFT DATE: 2019-07-18



CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

CAPITAL AREA
FIGURE 5.2.0



- ★ Capital Sites
- Capital Area Boundary
- Zoning
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



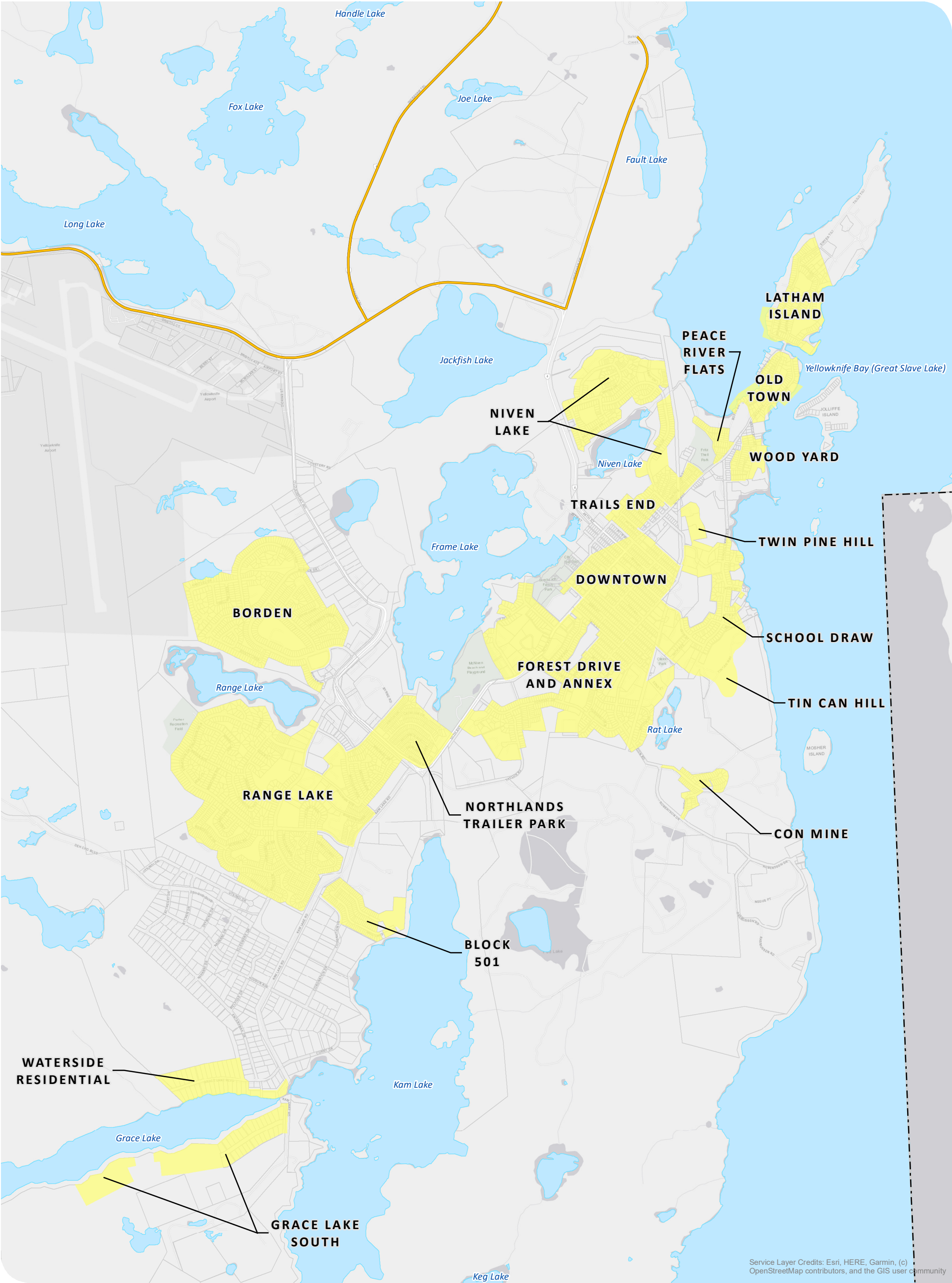
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MAP CREATED BY: PH
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PROJECT: 18-7267 STATUS: DRAFT DATE: 2019-06-26



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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

RESIDENTIAL AREAS
FIGURE 5.3



- Residential Areas
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



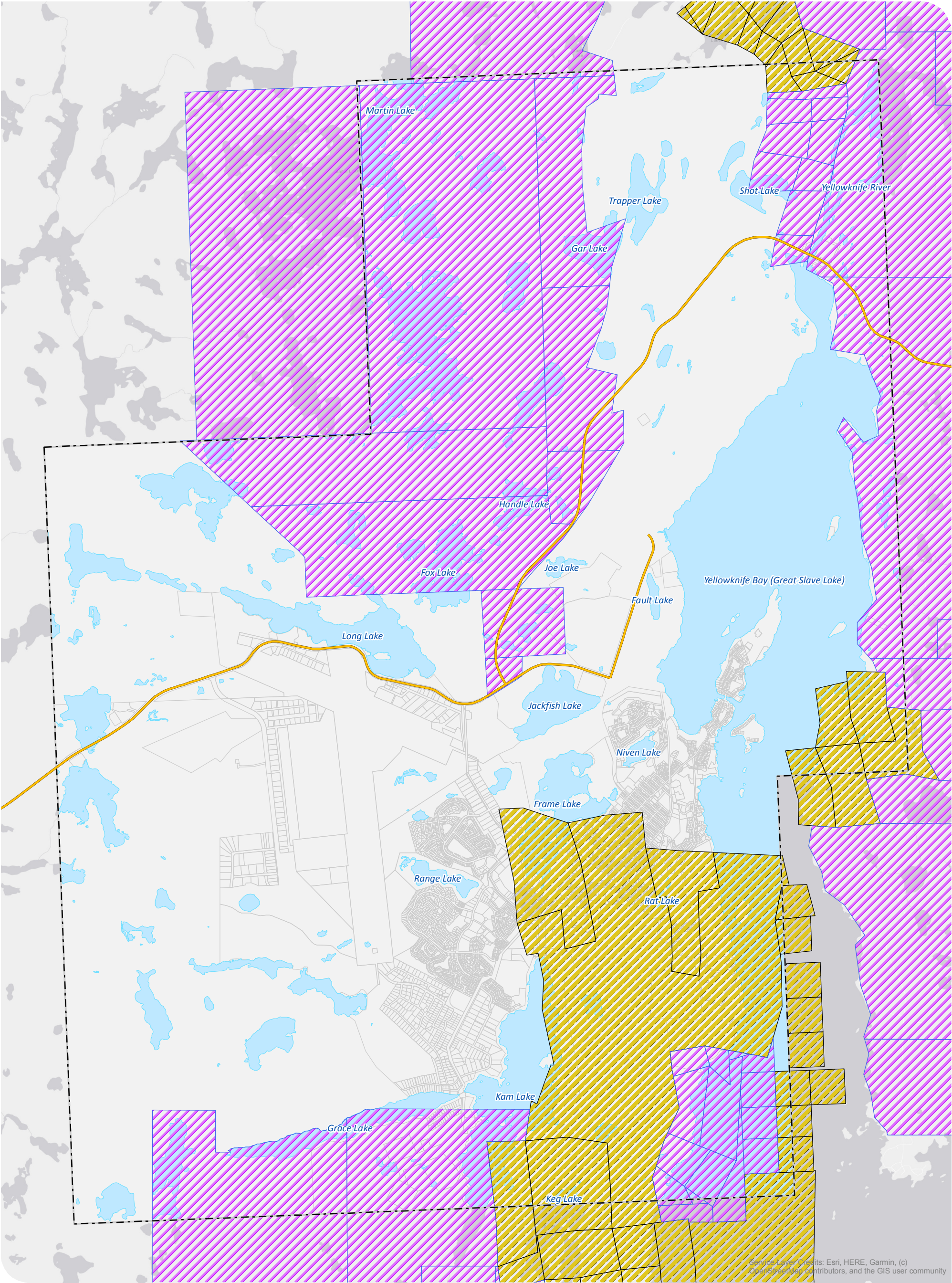
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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

MINERAL TENURE
FIGURE 5.7



- Highway
- Municipal Boundary
- Active_Mineral_Claims
- Active_Mineral_Leases
- Lake
- Parcel Fabric



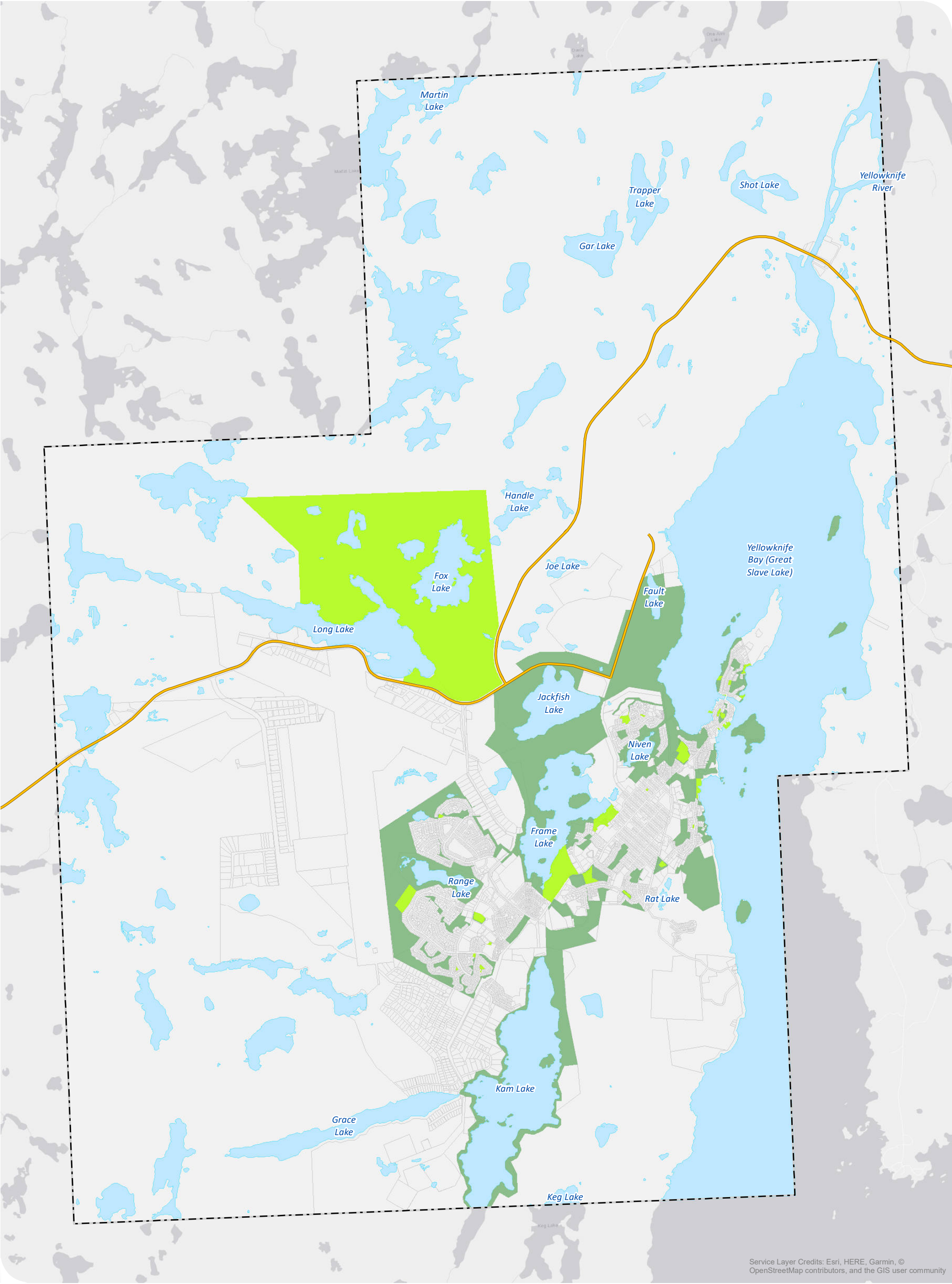
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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

OPEN SPACE
FIGURE 5.9.1



- Green Space
- Parks
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



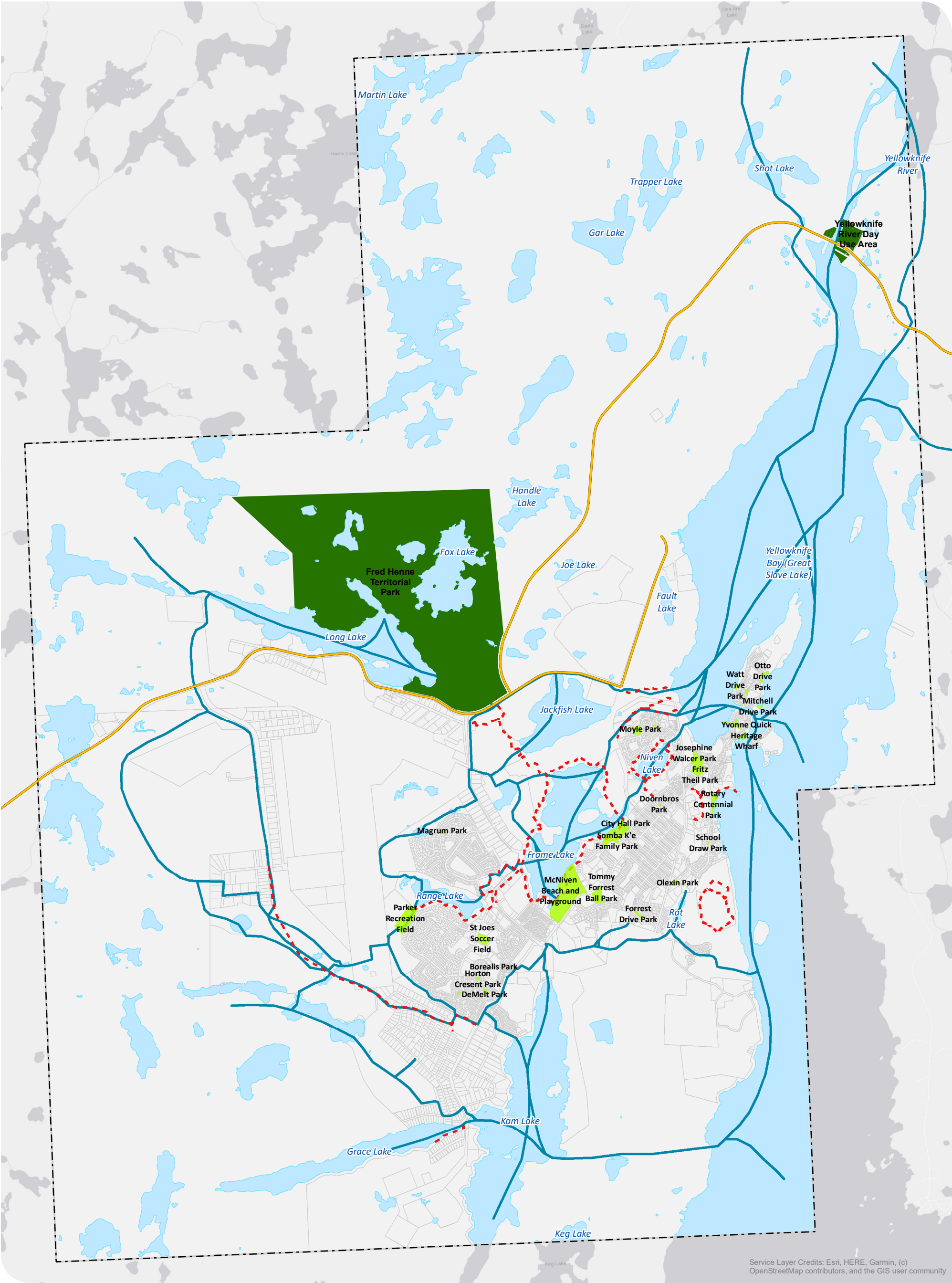
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MAP CHECKED BY: MK
MAP PROJECTION: NAD 1983 UTM Zone 11N

SCALE 1:96,355
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CITY OF YELLOWKNIFE

2018 COMMUNITY PLAN REVIEW

PARKS AND TRAILS

FIGURE 5.9.2



- Trail
- Snowmobile Trail
- City Parks
- Territorial Parks
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



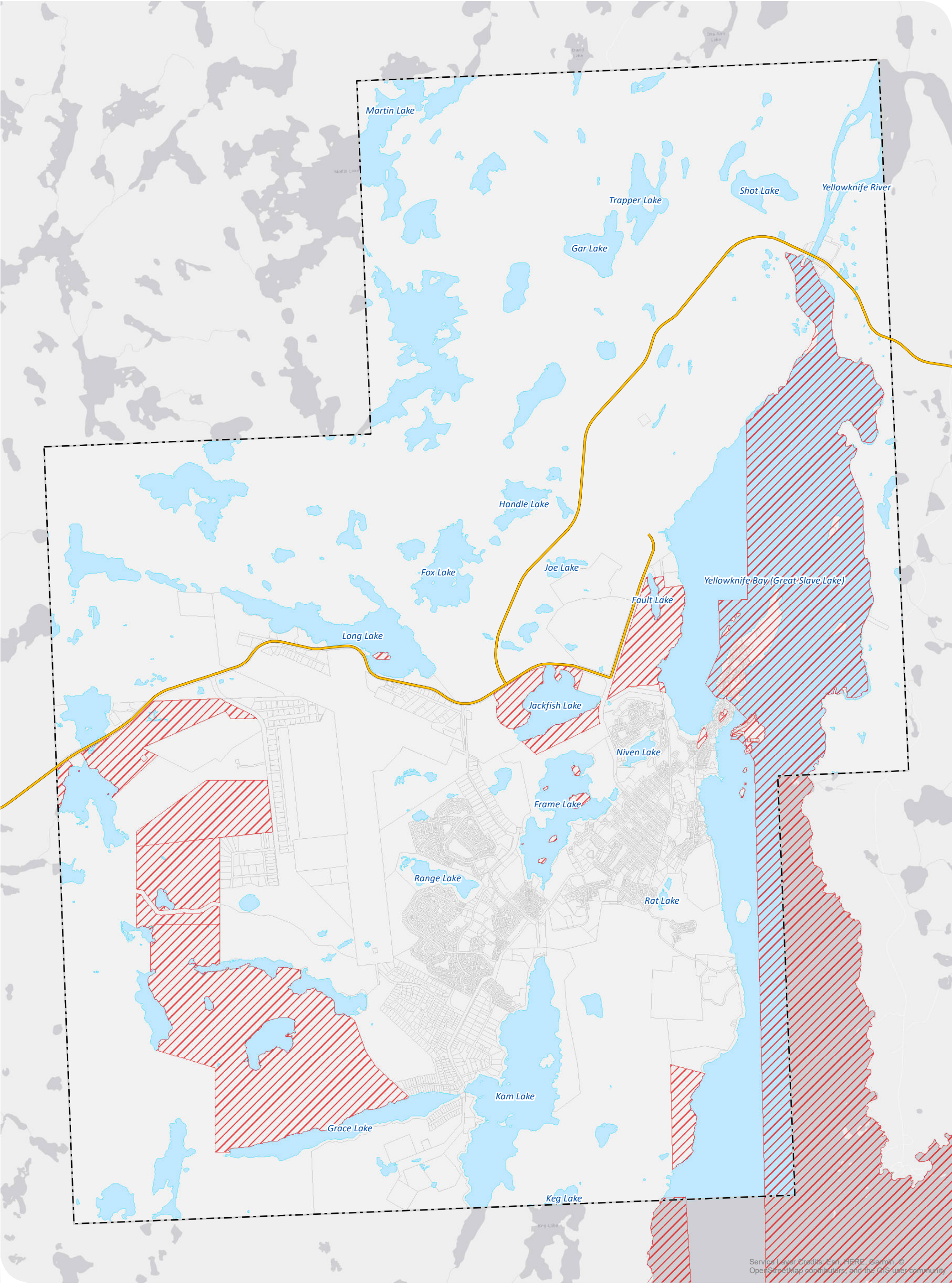
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MAP CHECKED BY: MK
MAP PROJECTION: NAD 1983 UTM Zone 11N

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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

**INTERIM LAND
WITHDRAWALS**

FIGURE 5.13



- Interim Land Withdrawal (Surface)
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



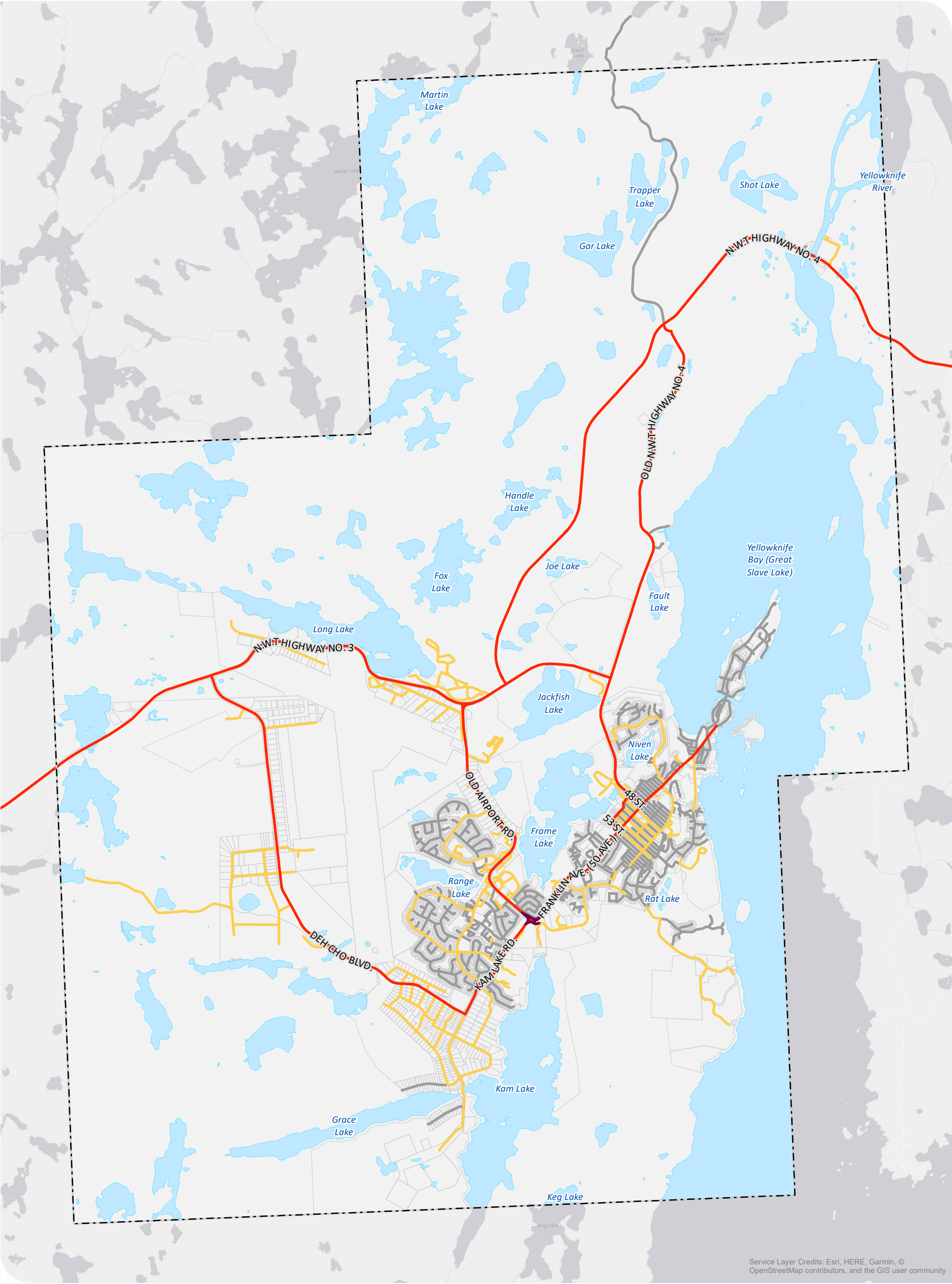
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PROJECT: 18-7267 STATUS: DRAFT DATE: 2018-10-17










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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

ROAD CLASSIFICATIONS
FIGURE 5.14.3



- | | |
|--|--|
|  Divided Road |  Municipal Boundary |
|  Arterial Road |  Lake |
|  Collector Road |  Parcel Fabric |
|  Local Road | |



MAP DRAWING INFORMATION:
DATA PROVIDED BY CITY OF YELLOWKNIFE,
GOVERNMENT OF NORTHWEST TERRITORIES

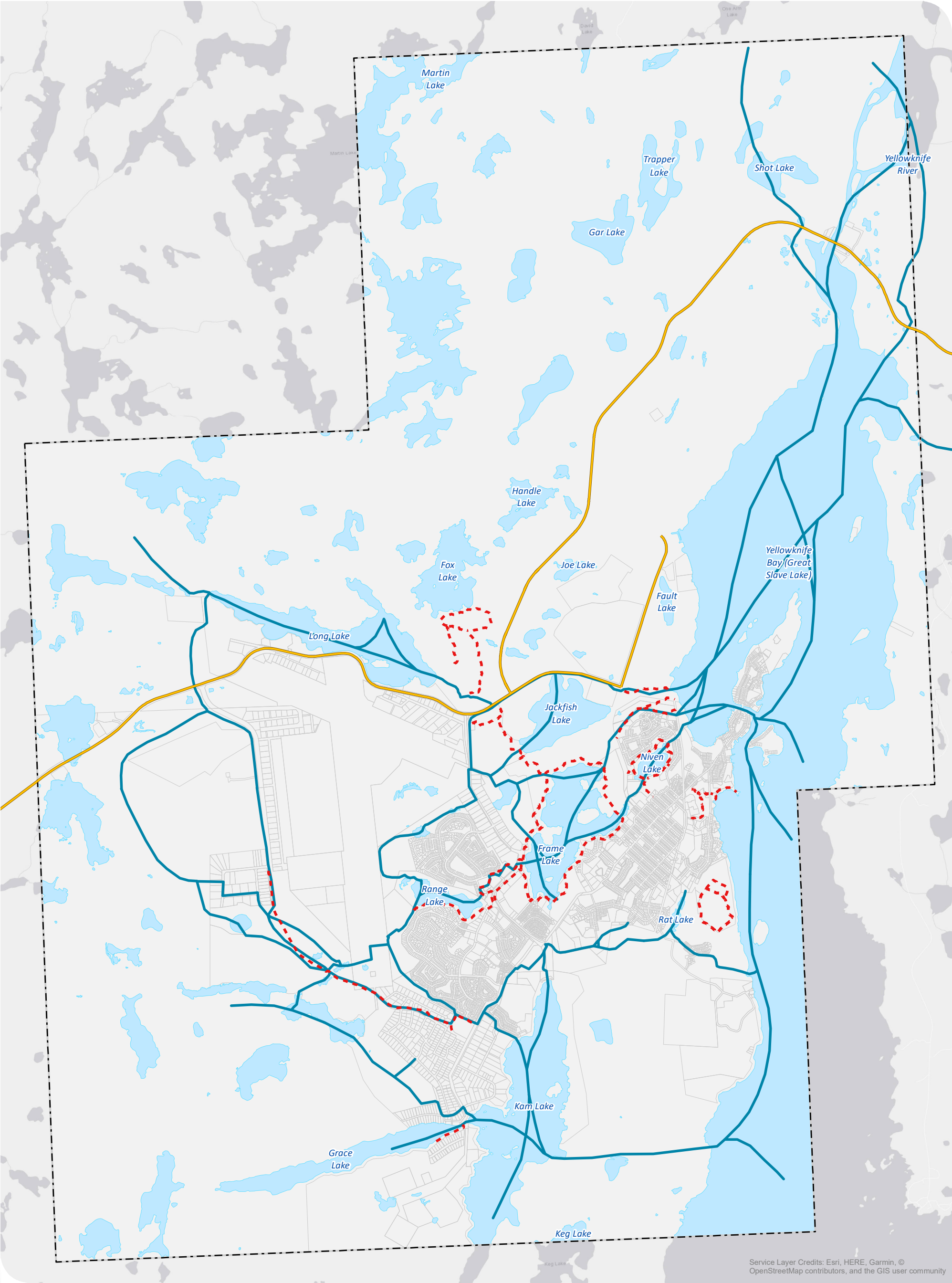
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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

TRAILS
FIGURE 5.14.10



- Trail
- Snowmobile Trail
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



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GOVERNMENT OF NORTHWEST TERRITORIES

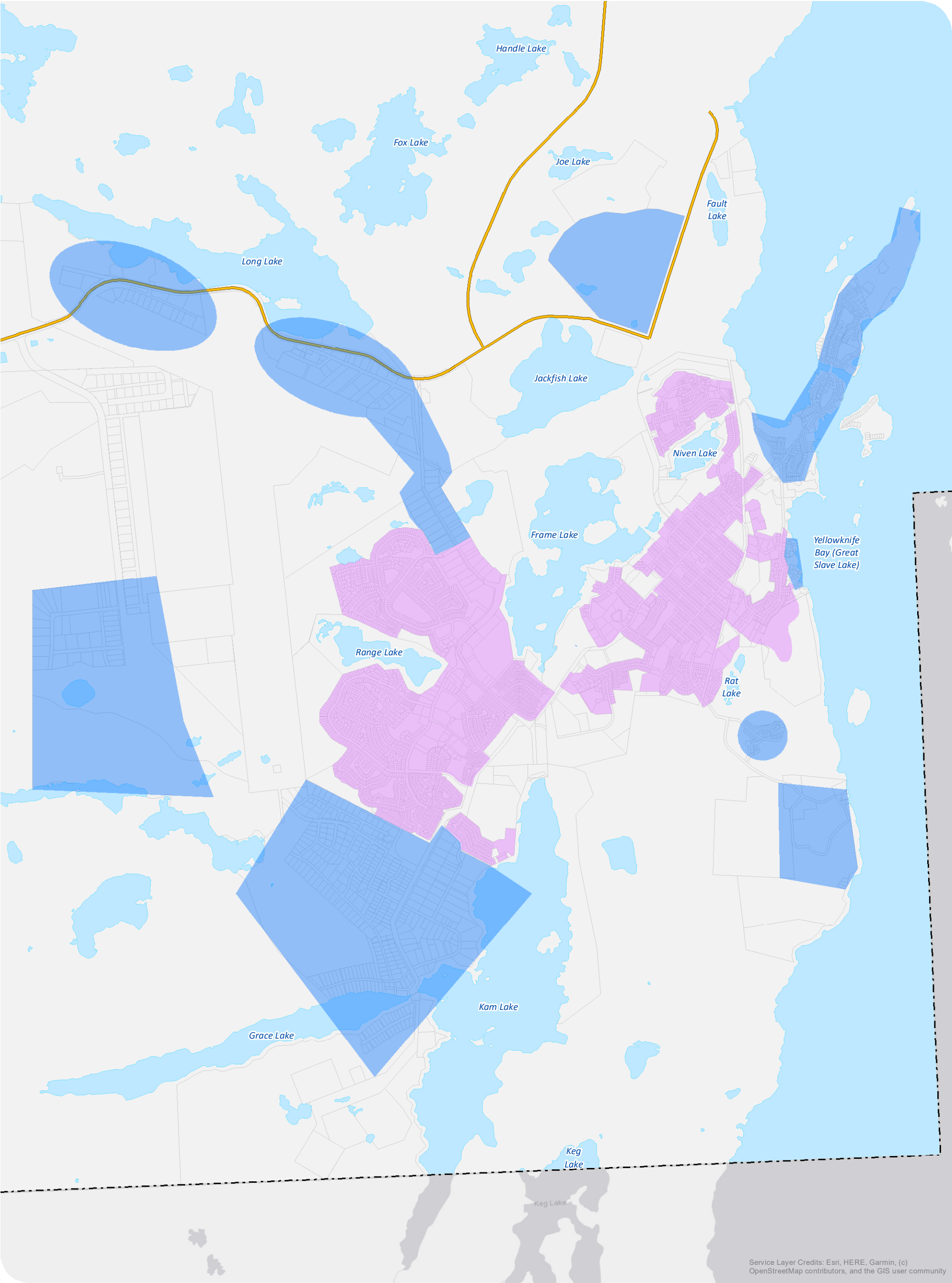
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CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

SEWAGE SERVICING
FIGURE 6.1



- Trucked Sewage Service Areas
- Piped Sewage Service Areas
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



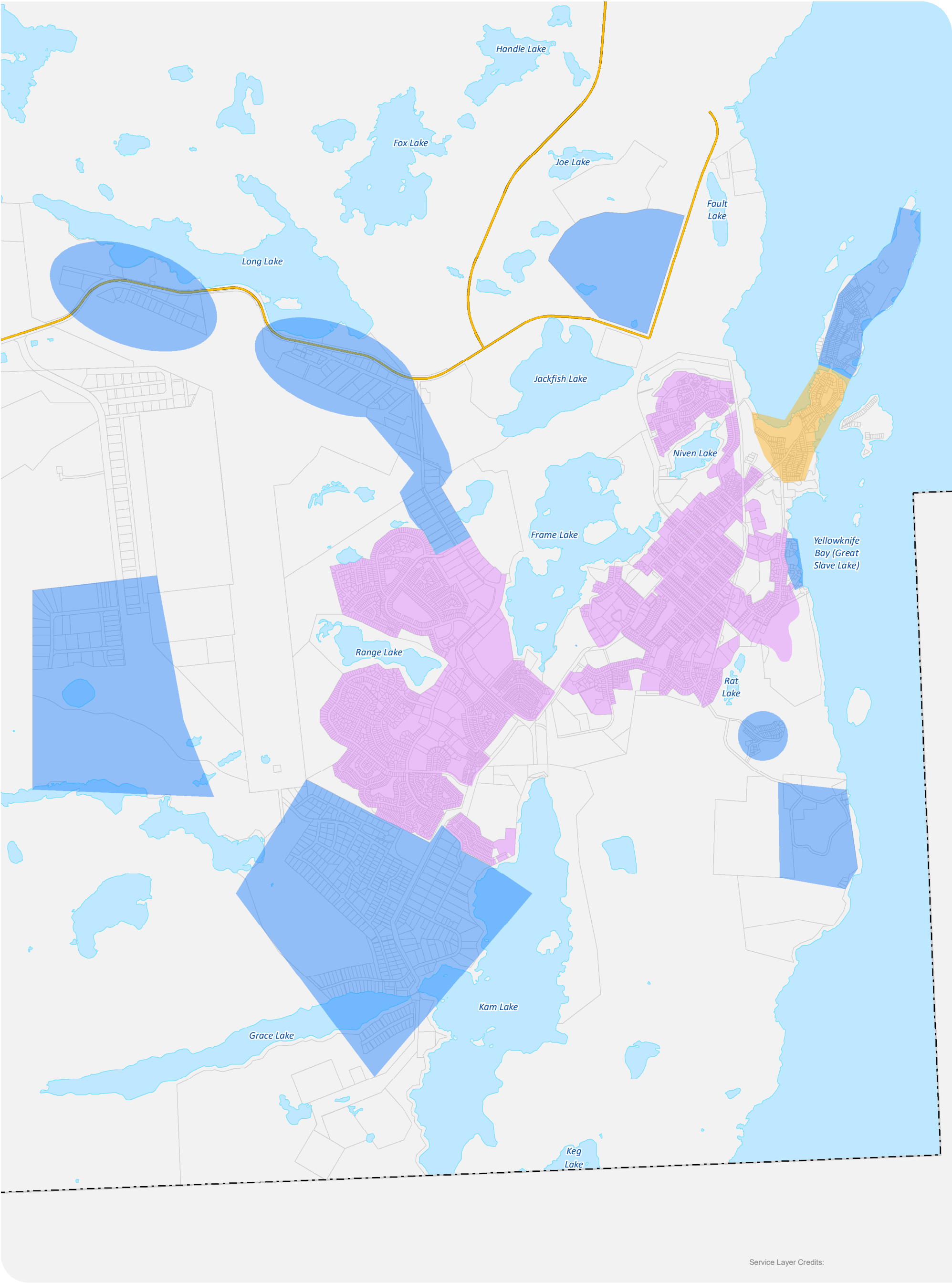
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SCALE 1:30,000
0 200 400 800 m



PROJECT: 18-7267 STATUS: DRAFT DATE: 2019-07-23



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2018 COMMUNITY PLAN REVIEW

WATER SUPPLY
FIGURE 6.2



- Trucked Water Service Areas
- Piped Water Service Areas
- Seasonal Piped/Trucked Water Service
- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



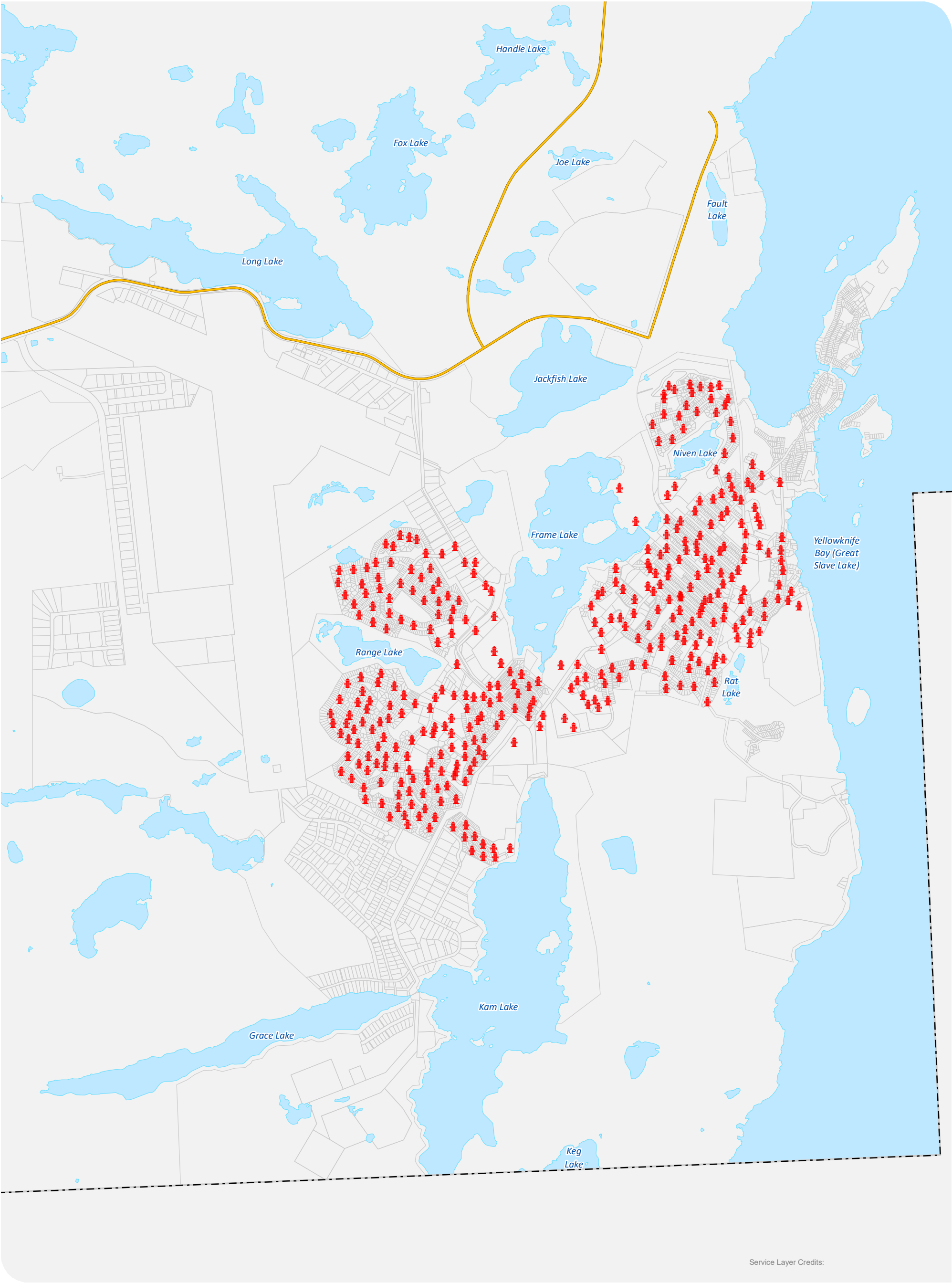
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MAP CREATED BY: PH
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SCALE 1:30,000
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PROJECT: 18-7267 STATUS: DRAFT DATE: 2019-07-18








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2018 COMMUNITY PLAN REVIEW

FIRE HYDRANTS
FIGURE 6.4



-  Fire Hydrants
-  Highway
-  Municipal Boundary
-  Lake
-  Parcel Fabric



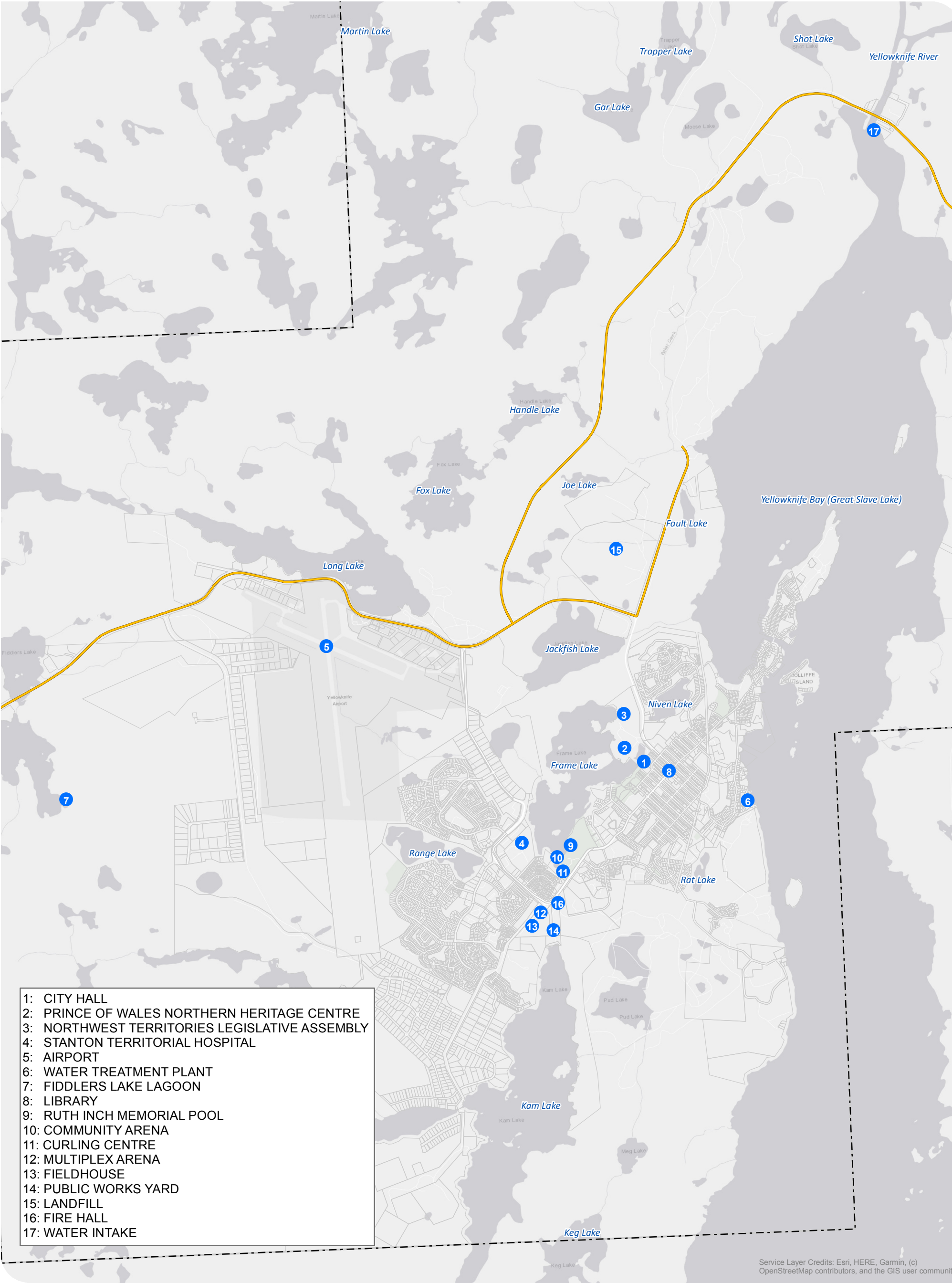
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GOVERNMENT OF NORTHWEST TERRITORIES

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SCALE 1:30,000
0 200 400 800 m



PROJECT: 18-7267 STATUS: DRAFT DATE: 2019-07-18



CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

MINERAL TENURE

FIGURE 6.5



- Highway
- Municipal Boundary
- Lake
- Parcel Fabric



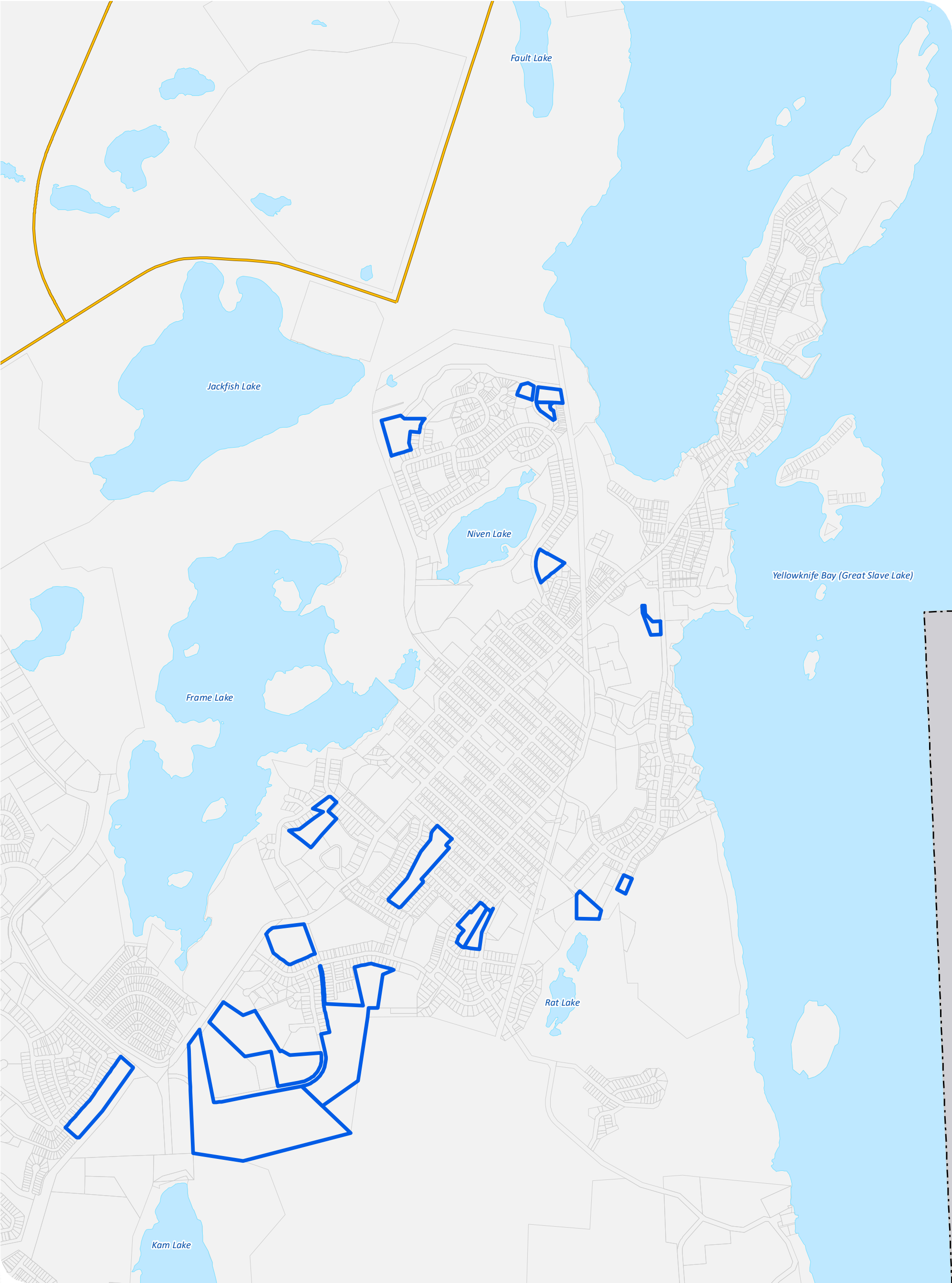
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SCALE 1:40,000
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PROJECT: 18-7267 STATUS: DRAFT DATE: 7/19/2019








CITY OF YELLOWKNIFE
2018 COMMUNITY PLAN REVIEW

RESIDENTIAL INFILL
OPPORTUNITIES

FIGURE 8.3.4



-  Residential Infill Opportunities
-  Municipal Boundary
-  Parcel Fabric
-  Lake
-  Highway



MAP DRAWING INFORMATION:
DATA PROVIDED BY CITY OF YELLOWKNIFE

MAP CREATED BY: PH
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SCALE 1:15,000
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PROJECT: 18-7267 STATUS: DRAFT DATE: 2019-07-23

Appendix C

Data and Calculations

Population Projections

Northwest Territories and Yellowknife, 2018 - 2035

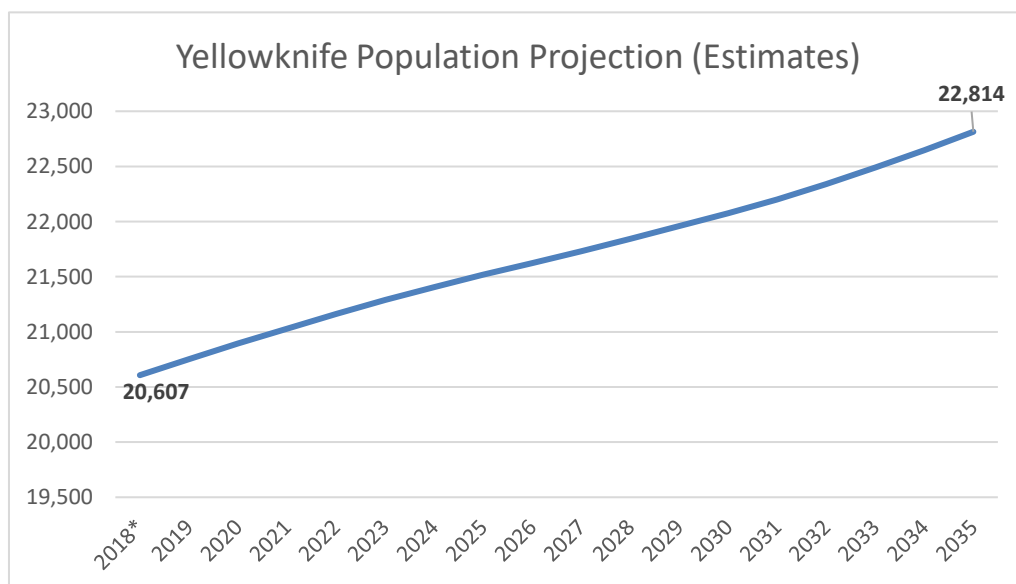
Yellowknife Population Projection (Estimates)

2018*	20,607		
2019	20,752		
2020	20,893		
2021	21,027		
2022	21,161		
2023	21,288	3.30%	681 5 year values
2024	21,406		
2025	21,517		
2026	21,623		
2027	21,731		
2028	21,844	6.00%	1,237 10 year values
2029	21,958		
2030	22,075		
2031	22,201		
2032	22,339		
2033	22,491		
2034	22,648		
2035	22,814	10.71%	2,207 15 year values

Notes:

1. Source: NWT Bureau of Statistics

2. * Population estimates



City of Yellowknife Land Use Analysis - based upon 2018 Tax Roll		Area (m2)			Lots	
Total Land Area within City Boundaries	105640000	% of total land area within City Boundary	% of total Zoned / Useable Land	Number of Lots	% total lots	
Total Surveyed Land	30365959.67					
Agricultural	45433.06364	0.043%	0.15%	9	0.15%	
Airport	5176815.283	4.900%	17.05%	17	0.28%	
Airport Industrial	585510.1668	0.554%	1.93%	53	0.89%	
Commercial	894939.3395	0.847%	2.95%	443	7.41%	
Commercial and Multi-Residential	4190.957573	0.004%	0.01%	6	0.10%	
Easement	270147.4754	0.256%	0.89%	142	2.37%	
Growth Management (Hinterland)	4973827.342	4.708%	16.38%	30	0.50%	
Industrial	3365722.862	3.186%	11.08%	350	5.85%	
Institutional	1244705.731	1.178%	4.10%	97	1.62%	
Mining and Quarrying	385644.5759	0.365%	1.27%	20	0.33%	
Multi-Residential	692645.748	0.656%	2.28%	200	3.35%	
Ndilo (Indigenous Community within Boundary)	230228.6112	0.218%	0.76%	3	0.05%	
Parks and Recreation	7020111.275	6.645%	23.12%	160	2.68%	
Residential	3002200.33	2.842%	9.89%	4178	69.88%	
Road	2473836.913	2.342%	8.15%	271	4.53%	
Total	30365959.67	28.74%	100.00%	5979	100.00%	

Land Availability within the City Boundary (Tax Roll)				Land Availability as confirmed by Dillon GIS Review			
GNWT - Commissioners Land		Unavailable		GNWT - Commissioners	41776877.54	4177.687754	30.583%
Vacant land (*As determined through Tax Roll, not including airpor	887957.2236	88.79572236	0.650%	Vacant Land	1181227.692	118.1227692	0.865%
Undevelopable Land (*Includes Interim Withdrawl Lands, Airport, I		Unavailable		Undevelopable Land	53404987.96	5340.498796	39.095%
Water (some double counting as Parks and Recreation may include Water		Unavailable		Water	31465300	3146.53	23.034%
Developed (*As determined through Tax Roll does not include airp	18511621.05	1851.162105	13.551%	Developed Lands	8774806.808	877.4806808	6.424%
				Total	136603200	13660.32	100.000%

Land Calculation Assumptions

Residential	540 m2/unit per single density residential (R1)
	37.8 units/ha for row/townhouses (2010-2018 multi-unit density average)
	37.8 units/ha for high density (2010-2018 multi-unit density average)
	2.7 people per house hold
Commercial	4.36 ha/1000 population (existing land use average)
Industrial	18.2 ha/1000 population (existing land use average)
Institutional	6.22 ha/1000 population (existing land use average)
Parks and Recreation	17 ha/1000 population (2004 General Plan recommendation)

Sectoral Areas	Total Existing (2016) Supply Area (ha)	Existing (2016) Vacant Area (ha)	Demand Scenarios - Forecasting relative to 2018 based upon NWT Bureau of Statistics (April 2019)																											
																							New 'Greenfield' Area Required (ha)		Net New Greenfield Land Area Required (ha)					
			2018	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2035	2035							
Population	20,607	20,607	20,752	20,893	21,027	21,161	21,288	21,406	21,517	21,623	21,731	21,844	21,958	22,075	22,201	22,339	22,491	22,648	22,814											
Residential (single-unit)	300.2	10.6	4.7	3.4	5.0	4.6	8.2	9.6	10.9	12.2	13.5	14.8	16.2	17.6	19.1	20.5	22.4	24.5	26.5	16.5	24.7									
Residential (row)			0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.9	2.2	0.0									
Residential (multi-unit)	69.3	9.1	0.4	0.8	1.2	1.6	2.0	2.3	2.7	3.0	3.3	3.6	4.0	4.3	4.7	5.1	5.5	6.0	6.5	0.0	0.0									
Residential (Total)		19.1	2.2	4.4	6.5	8.5	10.5	12.3	14.0	15.6	17.3	19.1	20.8	22.6	24.6	26.7	29.0	31.4	35.1	16.5	24.7									
Commercial	89.9	7.9	0.6	1.2	1.8	2.4	3.0	3.5	4.0	4.4	4.9	5.4	5.9	6.4	6.9	7.6	8.2	8.9	8.6	2.1	2.6									
Industrial	375.1	61.8	2.6	5.2	7.8	10.1	12.4	14.5	16.6	18.5	20.6	22.7	24.6	26.5	29.0	31.5	34.3	37.1	40.2	0.0	0.0									
Institutional	124	0.5	0.9	1.8	2.8	3.4	4.2	5.0	5.7	6.8	7.0	7.7	8.4	9.1	9.9	10.8	11.7	12.7	13.7	13.5	18.5									
Parks and Recreation	702	0.0	2.5	4.9	7.1	9.4	11.6	13.8	15.5	17.3	19.1	21.0	23.0	25.0	27.1	29.4	32.0	34.7	37.5	37.5	37.5									
Total	1,661.0	107.9	8.9	17.5	25.7	33.9	41.7	48.9	55.7	62.2	68.8	75.7	82.7	89.8	97.5	106.0	115.3	124.9	136.2											
Demand			8.9	17.5	25.7	33.9	41.7	48.9	55.7	62.2	68.8	75.7	82.7	89.8	97.5	106.0	115.3	124.9	136.2											
Supply	1,661.0	88.8	79.9	71.3	63.1	54.9	47.1	39.9	33.1	26.6	20.0	13.1	6.1	-1.0	-8.7	-17.2	-26.8	-36.1	-47.4											

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